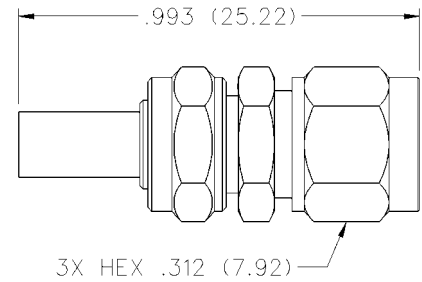
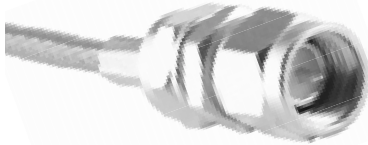


# SMA - 50 Ohm Connectors

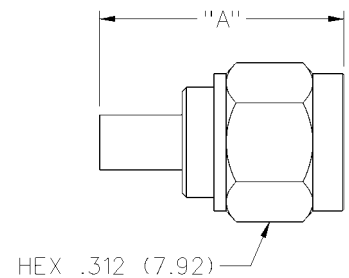
For Flexible Cable

## Straight Crimp Type Plug - Captivated Contact



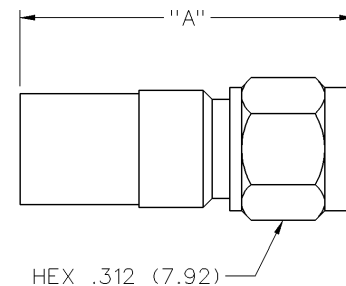
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0402-001	142-0402-006
RG-161/U, 174,188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0403-001	142-0403-006
RG-188 DS, RG-316 DS	1.15 + .02 f (GHz) 0-12.4 GHz	142-0404-001	142-0404-006
RG-58/U, 141, 303	1.15 + .01 f (GHz) 0-12.4 GHz	142-0407-001	142-0407-006
RG-55/U, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0408-001	142-0408-006

## Straight Crimp Type Plug (3-piece) - Solder or Crimp Captivated Contact



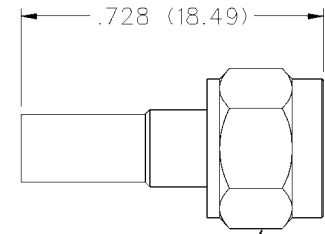
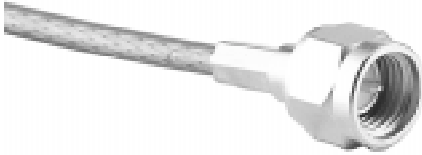
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0402-011	142-0402-016	.591 (15.01)
RG-161/U, 174,188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0403-011	142-0403-016	.706 (17.93)
RG-188 DS, RG-316 DS	1.15 + .02 f (GHz) 0-12.4 GHz	142-0404-011	142-0404-016	.706 (17.93)
RG-58/U, 141, 303	1.15 + .01 f (GHz) 0-12.4 GHz	142-0407-011	142-0407-016	.706 (17.93)
RG-55/U, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0408-011	142-0408-016	.706 (17.93)
RG-179/U, 187	N/A	142-0433-011	142-0433-016	.706 (17.93)

## Straight Crimp Type Plug (3-piece) - Captivated Contact Low Loss Cable



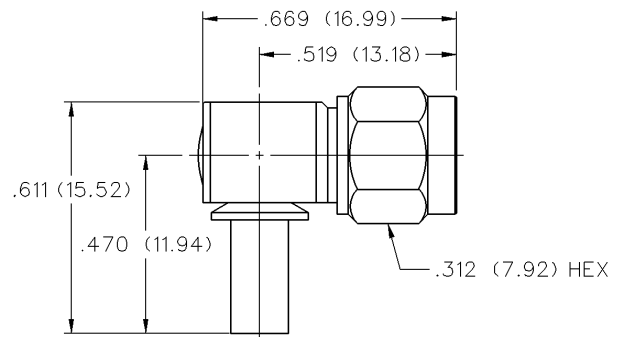
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
LMR-100, HPF-100, RF-100	1.15 + .02f (GHz) 0-12.4 GHz	142-0403-011	142-0403-016	.706 (17.93)
LMR-195, HPF-195, RF-195	1.15 + .01f (GHz) 0-12.4 GHz	142-0407-011	142-0407-016	.706 (17.93)
LMR-200, HPF-200, RF-200	1.10 + .03f (GHz) 0-12.4 GHz	142-0439-001	142-0439-006	.844 (21.44)
LMR-240, HPF-240, RF-240	1.10 + .03f (GHz) 0-12.4 GHz	142-0435-001	142-0435-006	.844 (21.44)

## Straight Crimp Type Plug - 3 Piece - Slide on Nut - Solder or Crimp Captivated Contact



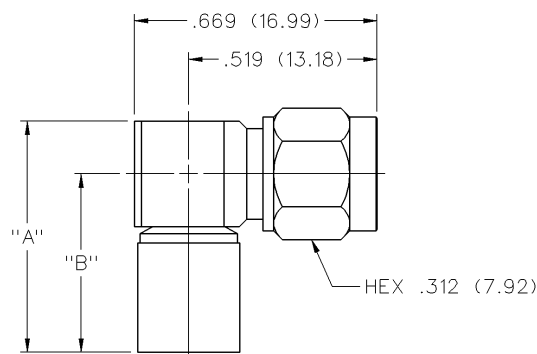
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
RG-161/U, 174,188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-2403-001	142-2403-006
RG-188 DS, RG-316 DS	1.15 + .02 f (GHz) 0-12.4 GHz	142-2404-001	142-2404-006

## Right Angle Crimp Type Plug - Captivated Contact



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
RG-178/U, 196	1.20 + .03 f (GHz) 0-12.4 GHz	142-0402-101	142-0402-106
RG-161/U, 174,188, 316	1.15 + .03 f (GHz) 0-12.4 GHz	142-0403-101	142-0403-106
RG-188 DS, RG-316 DS	1.15 + .03 f (GHz) 0-12.4 GHz	142-0404-101	142-0404-106
RG-58/U, 141, 303	1.15 + .02 f (GHz) 0-12.4 GHz	142-0407-101	142-0407-106
RG-55/U, 142, 223, 400	1.15 + .02 f (GHz) 0-12.4 GHz	142-0408-101	142-0408-106
RG-179/U, 187	N/A	142-0433-101	142-0433-106

## Right Angle Crimp Type Plug - Captivated Contact Low Loss Cable

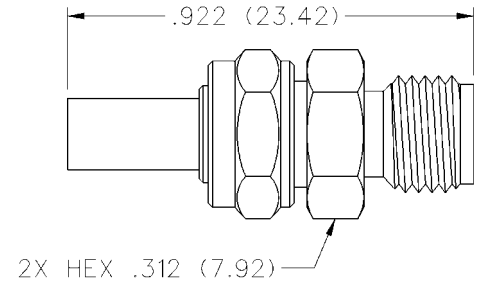


CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"	"B"
LMR-100, HPF-100, RF-100	1.15 + .03f (GHz) 0-12.4 GHz	142-0403-101	142-0403-106	.611 (15.52)	.470 (11.94)
LMR-195, HPF-195, RF-195	1.15 + .02f (GHz) 0-12.4 GHz	142-0407-101	142-0407-106	.611 (15.52)	.470 (11.94)
LMR-200, HPF-200, RF-200	1.10 + .06f (GHz) 0-12.4 GHz	142-0439-101	142-0439-106	.611 (15.52)	.470 (11.94)
LMR-240, HPF-240, RF-240	1.10 + .06f (GHz) 0-12.4 GHz	142-0435-101	142-0435-106	.635 (16.13)	.490 (12.45)

# SMA - 50 Ohm Connectors

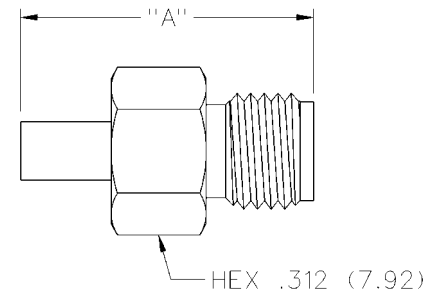
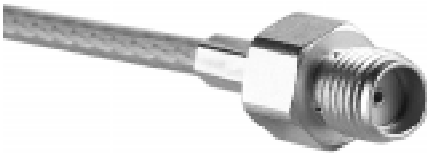
For Flexible Cable

## Straight Crimp Type Jack - Captivated Contact



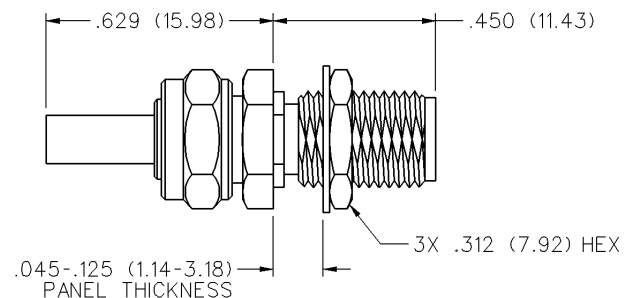
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0302-001	142-0302-006
RG-161/U, 174,188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0303-001	142-0303-006
RG-188 DS, RG-316 DS	1.15 + .02 f (GHz) 0-12.4 GHz	142-0304-001	142-0304-006
RG-58/U, 141, 303	1.15 + .01 f (GHz) 0-12.4 GHz	142-0307-001	142-0307-006
RG-55/U, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0308-001	142-0308-006

## Straight Crimp Type Jack (3-piece) - Solder or Crimp Captivated Contact

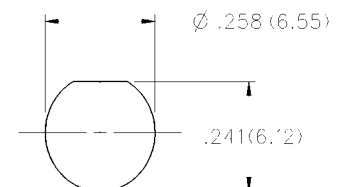


CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0302-011	142-0302-016	.651 (16.54)
RG-161/U, 174,188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0303-011	142-0303-016	.756 (19.20)
RG-188 DS, RG-316 DS	1.15 + .02 f (GHz) 0-12.4 GHz	142-0304-011	142-0304-016	.756 (19.20)
RG-58/U, 141, 303	1.15 + .01 f (GHz) 0-12.4 GHz	142-0307-011	142-0307-016	.756 (19.20)
RG-55/U, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0308-011	142-0308-016	.756 (19.20)
RG-179/U, 187	N/A	142-0333-011	142-0333-016	.756 (19.20)

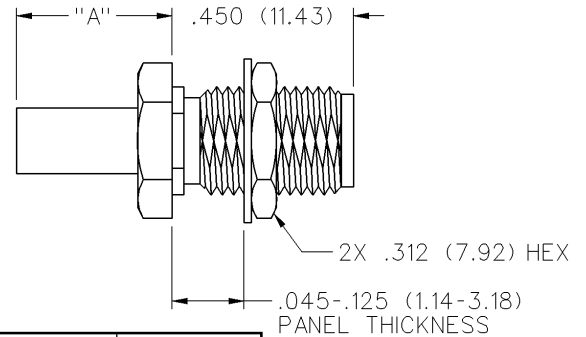
## Straight Crimp Type Bulkhead Jack - Captivated Contact



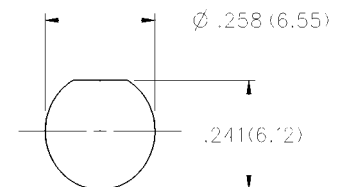
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0302-401	142-0302-406
RG-161/U, 174,188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0303-401	142-0303-406
RG-188 DS, RG-316 DS	1.15 + .02 f (GHz) 0-12.4 GHz	142-0304-401	142-0304-406
RG-58/U, 141, 303	1.15 + .01 f (GHz) 0-12.4 GHz	142-0307-401	142-0307-406
RG-55/U, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0308-401	142-0308-406



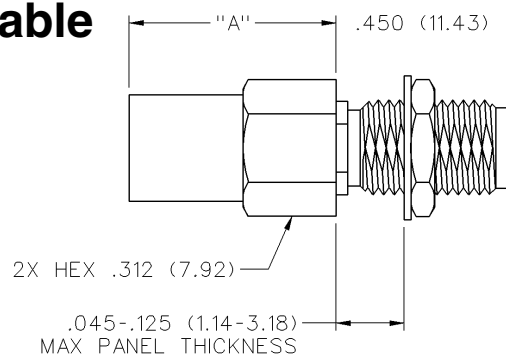
### Straight Crimp Type Bulkhead Jack (3-piece) - Solder or Crimp Captivated Contact



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0302-431	142-0302-436	.285 (7.24)
RG-161/U, 174,188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0303-411	142-0303-416	.385 (9.78)
RG-188 DS, RG-316 DS	1.15 + .02 f (GHz) 0-12.4 GHz	142-0304-411	142-0304-416	.385 (9.78)
RG-58/U, 141, 303	1.15 + .01 f (GHz) 0-12.4 GHz	142-0307-411	142-0307-416	.385 (9.78)
RG-55/U, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0308-411	142-0308-416	.385 (9.78)
RG-179/U, 187	N/A	142-0333-411	142-0333-416	.385 (9.78)

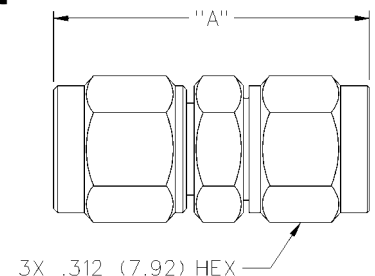


### Straight Crimp Type Bulkhead Jack (3-piece) - Captivated Contact - Low Loss Cable



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
LMR-100, HPF-100, RF-100	1.15 + .02f (GHz) 0-12.4 GHz	142-0303-411	142-0303-416	.385 (9.78)
LMR-195, HPF-195, RF-195	1.15 + .01f (GHz) 0-12.4 GHz	142-0307-411	142-0307-416	.385 (9.78)
LMR-200, HPF-200, RF-200	1.10 + .03f (GHz) 0-12.4 GHz	142-0339-401	142-0339-406	.545 (13.84)
LMR-240, HPF-240, RF-240	1.10 + .03f (GHz) 0-12.4 GHz	142-0335-401	142-0335-406	.545 (13.84)

### Straight Clamp Type Plug - Captivated Contact

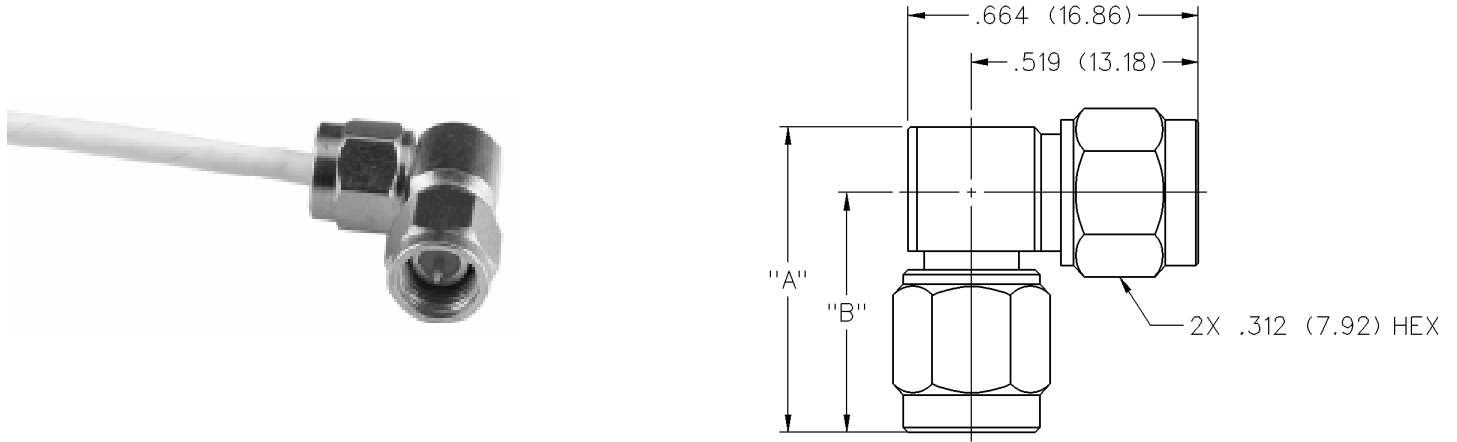


CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0202-011	142-0202-016	.816 (20.73)
RG-161/U, 174, 188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0203-011	142-0203-016	.816 (20.73)
RG-58/U, 141, 303, 55, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0207-011	142-0207-016	.895 (22.73)

# SMA - 50 Ohm Connectors

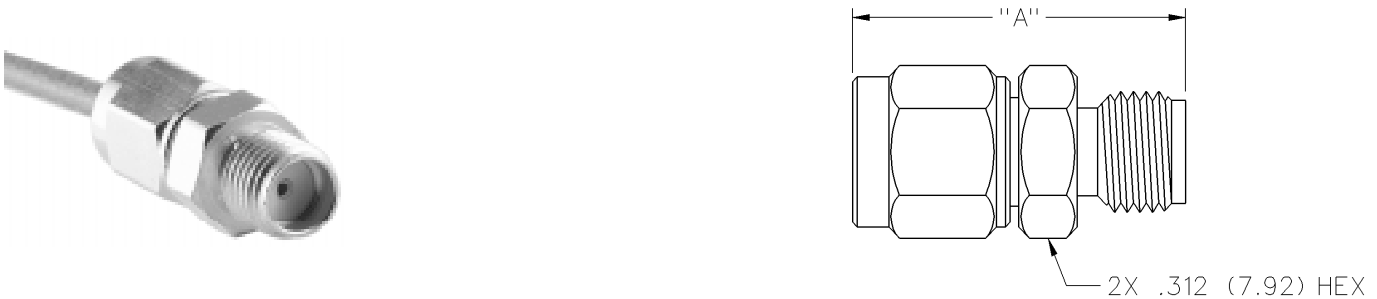
For Flexible Cable

## Right Angle Clamp Type Plug - Captivated Contact



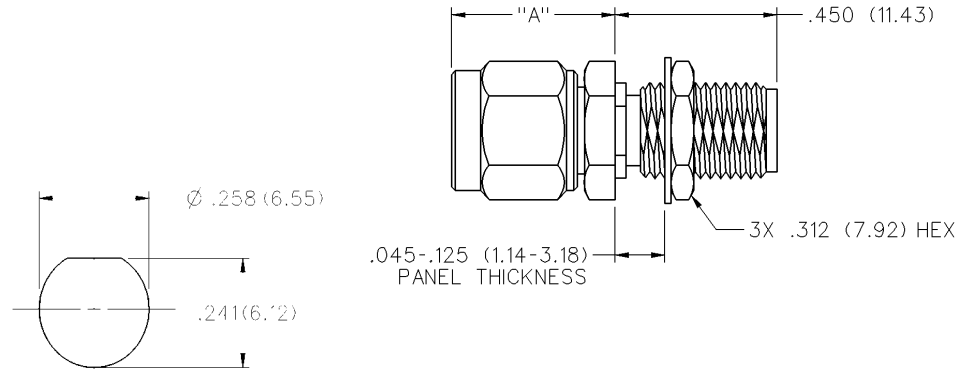
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"	"B"
RG-178/U, 196	1.20 + .03 f (GHz) 0-12.4 GHz	142-0202-101	142-0202-106	.569 (14.45)	.428 (10.81)
RG-161/U, 174, 188, 316	1.15 + .03 f (GHz) 0-12.4 GHz	142-0203-101	142-0203-106	.574 (14.58)	.433 (11.00)
RG-58/U, 141, 303, 55, 142, 223, 400	1.15 + .02 f (GHz) 0-12.4 GHz	142-0207-101	142-0207-106	.686 (17.42)	.545 (13.84)

## Straight Clamp Type Jack - Captivated Contact



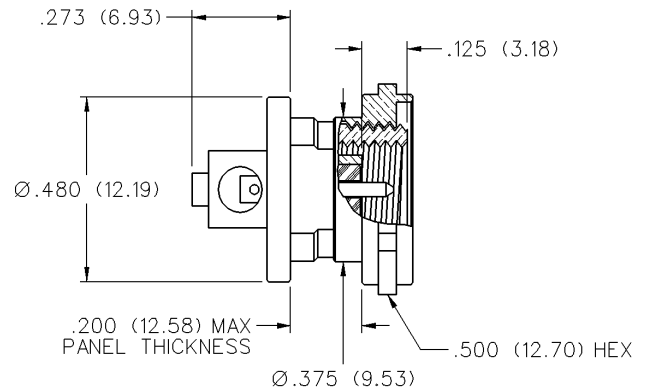
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0102-011	142-0102-016	.745 (18.92)
RG-161/U, 174, 188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0103-011	142-0103-016	.780 (19.81)
RG-58/U, 141, 303, 55, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0107-011	142-0107-016	.824 (20.93)

### Straight Clamp Type Bulkhead Jack - Captivated Contact



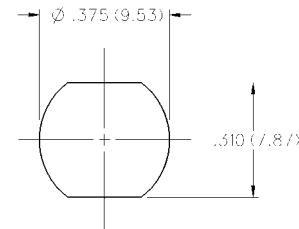
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
RG-178/U, 196	1.20 + .025 f (GHz) 0-12.4 GHz	142-0102-401	142-0102-406	.452 (11.48)
RG-161/U, 174, 188, 316	1.15 + .02 f (GHz) 0-12.4 GHz	142-0103-401	142-0103-406	.487 (12.37)
RG-58/U, 141, 303, 55, 142, 223, 400	1.15 + .01 f (GHz) 0-12.4 GHz	142-0107-401	142-0107-406	.531 (13.49)

### Rear Mount Bulkhead Plug - Antenna Connector



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED*
RG-178/U, .047 Semi-Rigid	VSWR: N/A 0-4 GHz	142-0801-421*

\* With Nickel mounting nut. Mates with SMA Jack Antenna Interface.

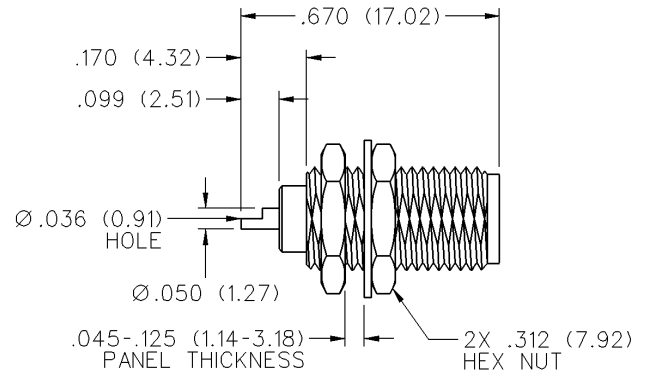
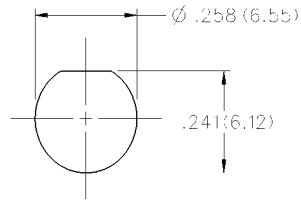


# SMA - 50 Ohm Connectors

Bulkhead Mount

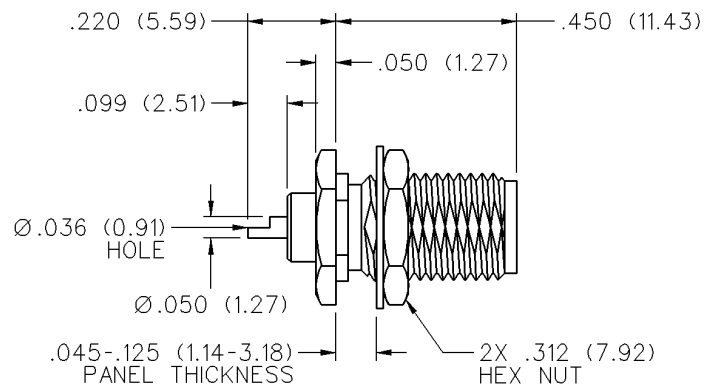
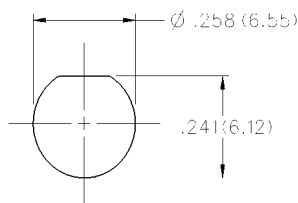
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## Front Mount Bulkhead Jack Receptacle



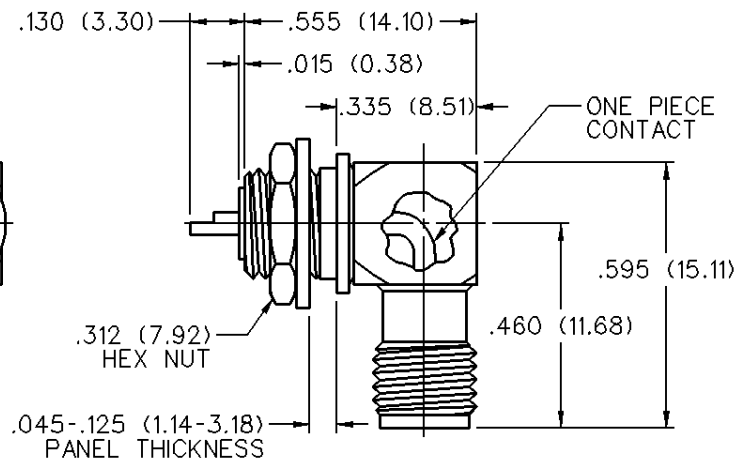
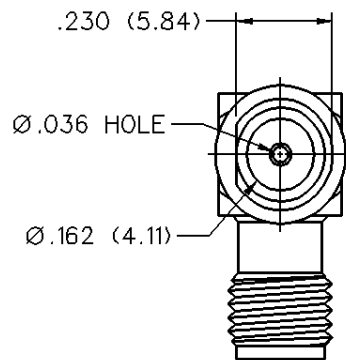
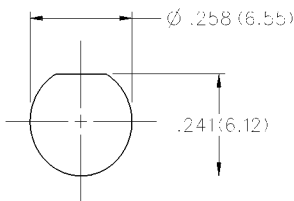
VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-411	142-0701-416

## Rear Mount Bulkhead Jack Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-401	142-0701-406

## Right Angle Bulkhead Mount Jack Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-531	142-0701-536

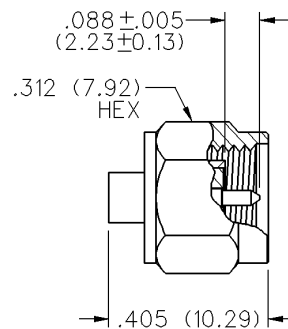
# SMA - 50 Ohm Connectors

For Semi-Rigid Cable

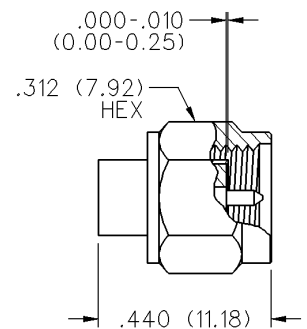
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## Straight Solder Type Plug - with contact, captive nut

Thin wall connector interface for .141 cable



**FIG. 1**  
THICKWALL

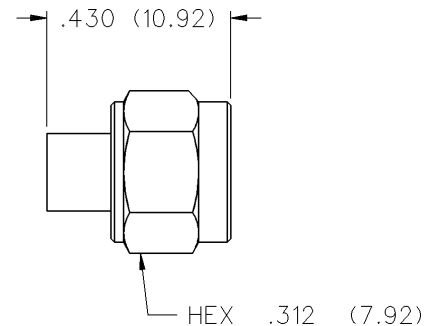
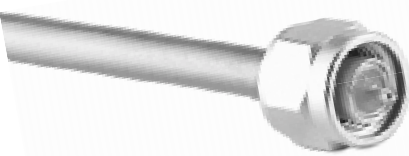


**FIG. 2**  
THINWALL

CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	FIG.
.086 Semi-Rigid	1.07 + .008 f (0-18 GHz) 1.35 Max (18-26.5 GHz)	142-0693-001	142-0693-006	1
.141 Semi-Rigid	1.05+.008 f (0-26.5 GHz)	142-0694-001*	142-0694-006*	2

\*Mating torque 8 inch-pounds maximum, coupling proof torque 8 inch-pounds maximum.

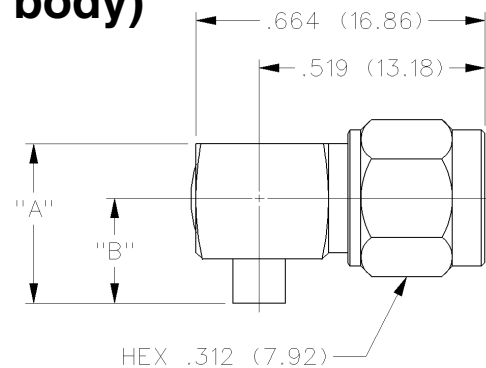
## Straight Solder Type Plug - without contact, thread-on nut



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
.141 Semi-Rigid	1.035 + .005 f (0-26.5 GHz)	142-0694-011	142-0694-016

Center conductor of cable serves as contact.

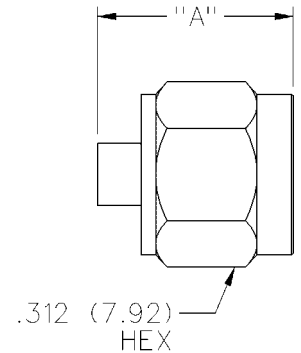
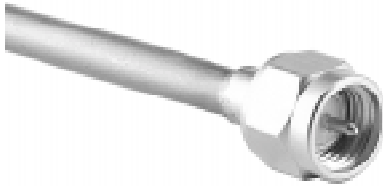
## Right Angle Solder Type Plug (1-piece body)



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"	"B"
.086 Semi-rigid	1.18 +.015f (0-12.4 GHz) 1.15 +.04f (12.4-18 GHz)	142-0693-101	142-0693-106	.409 (10.39)	.253 (6.43)
.141 Semi-rigid	1.15 +.015f (0-12.4 GHz) 1.15 +.04f (12.4-18 GHz)	142-0694-101	142-0694-106	.462 (11.73)	.306 (7.77)

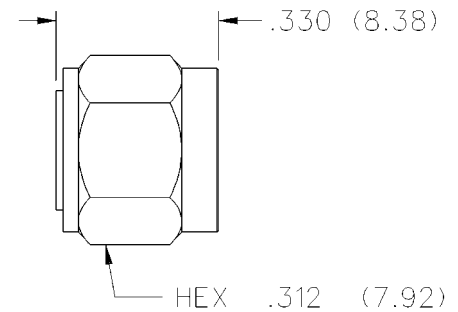
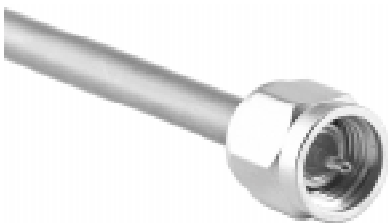


### Straight Solder Type Plug - with contact, thread-on nut



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"
.086 Semi-Rigid	1.07 + .008 f (0-18 GHz) 1.35 Max (18-26.5 GHz)	142-0693-051	142-0693-056	.405 (10.29)
.141 Semi-Rigid	1.05+.008 f (GHz) 0-26.5 GHz	142-0694-051	142-0694-056	.438 (11.13)

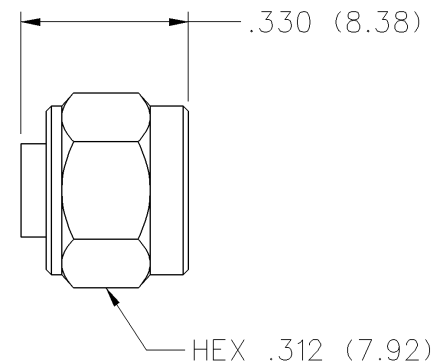
### Straight Solder Type Plug - Short Profile - without contact, captive nut



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
.141 Semi-Rigid	1.035 + .005 f (GHz) 0-26.5 GHz	142-0694-031	142-0694-036

Center conductor of cable serves as contact.

### Straight Solder Type Plug - without contact, slide-on nut



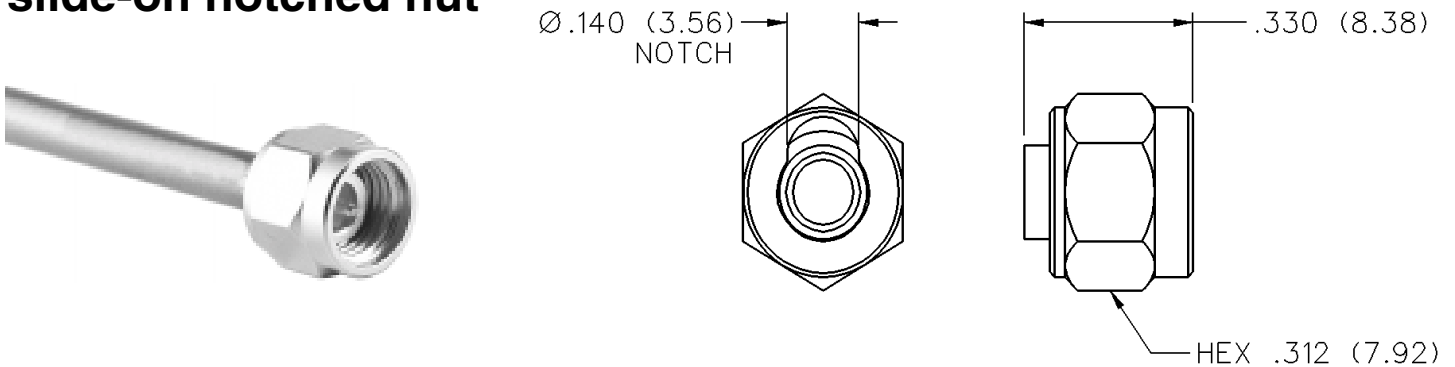
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
.141 Semi-Rigid	1.035 + .005 f (GHz) 0-26.5 GHz	142-0694-021	142-0694-026

Center conductor of cable serves as contact.

# SMA - 50 Ohm Connectors

For Semi-Rigid Cable

## Straight Solder Type Plug - without contact, slide-on notched nut



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
.141 Semi-Rigid	1.035 + .005 f (GHz) 0-26.5 GHz	142-0694-041	142-0694-046

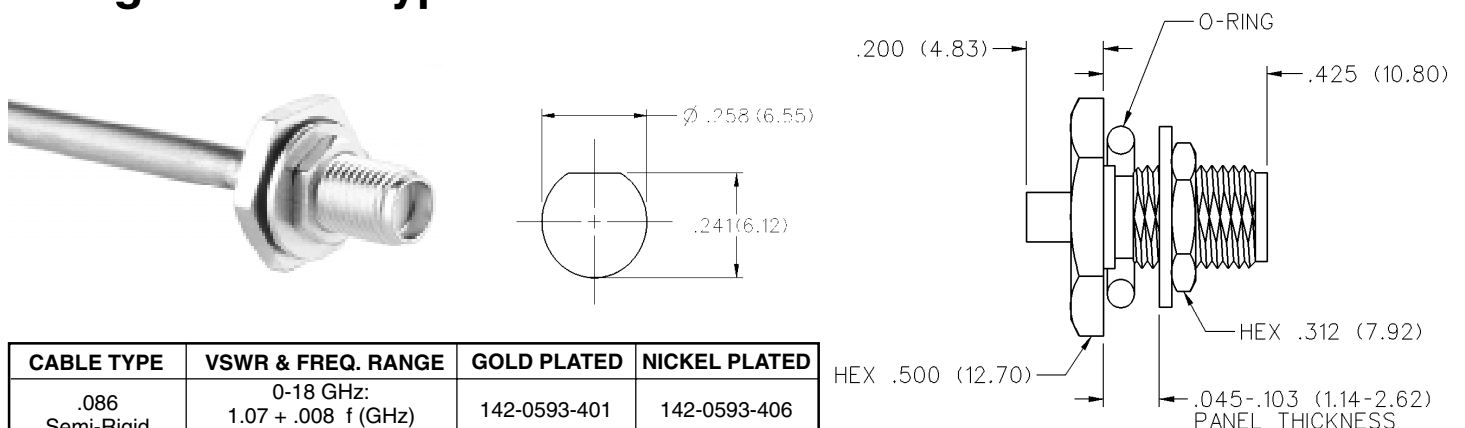
Center conductor of cable serves as contact.

## Straight Solder Type Jack



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
.086 Semi-Rigid	0-18 GHz: 1.07 + .008 f (GHz) 26.5 GHz: 1.35 Max	142-0593-001	142-0593-006
.141 Semi-Rigid	0-26.5 GHz: 1.05+.008 f (GHz)	142-0594-001	142-0594-006

## Straight Solder Type Bulkhead Jack



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
.086 Semi-Rigid	0-18 GHz: 1.07 + .008 f (GHz) 26.5 GHz: 1.35 Max	142-0593-401	142-0593-406
.141 Semi-Rigid	0-26.5 GHz: 1.05+.008 f (GHz)	142-0594-401	142-0594-406

Mounting hole layout Figure 1 page 174.

# SMA - 50 Ohm Connectors

End Launch Connectors - A Johnson Components® Original

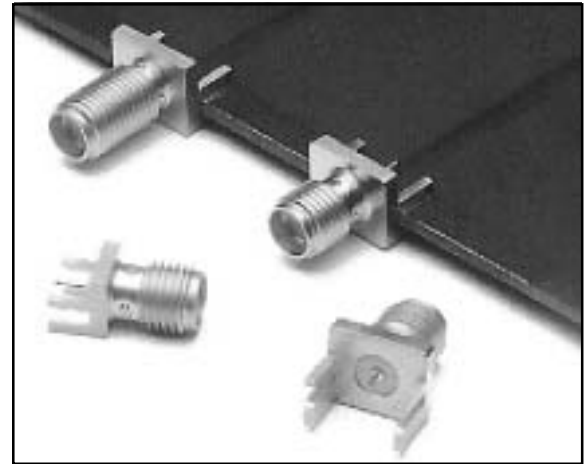


INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

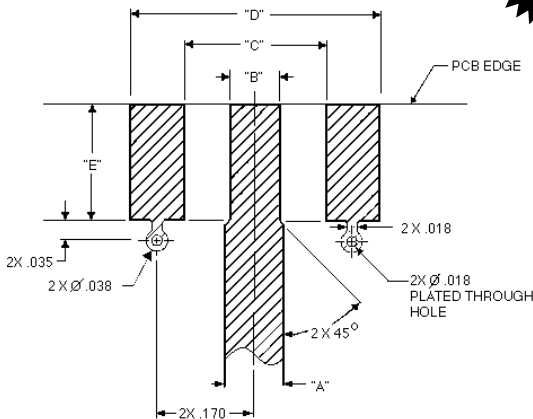
The **End Launch** connector is attached to the circuit board by inserting the board edge between the legs and soldering the legs and center conductor to pads on the board. For optimum high frequency performance, the connector to circuit board transition must be adjusted for low VSWR. To compensate for the transition from coax to microstrip, trace widths "A" and "B" must be adjusted based on circuit board thickness. When properly adjusted, this technique yields a low VSWR over a wide bandwidth.

The tabulated dimensions "A", "B", "C", "D", and "E" were determined experimentally to achieve low VSWR (typically less than 1.5 up to 18 GHz). The circuit board used for these tests was double-sided FR 4 with 1 oz. copper on both sides. The copper was left on the bottom of the board to create a ground plane for the 50 Ohm microstrip structure. While not all inclusive, these dimensions are given as reference information for selected **SMA End Launch** connectors. Further adjustments may be necessary depending upon the application. All dimensions are in inches.

Tabulated Dimensions "A", "B", "C" and "D" are symmetrical about the center line



**Surface Mount Versions Available!**  
(See page 49)



Part Number	Base Width	Board Thick	"A"	"B"	"C"	"D"	"E"
142-0701-801/806	.375	.062	.103	.090	.250	.440	.200
142-0701-851/861	.375	.062	.103	.090	.250	.440	.200
142-0701-871/876	.375	.062	.103	.090	.250	.440	.200
142-0711-821/826	.250	.062	.103	.070	.170	.380	.165
142-0711-871/876	.375	.047	.083	.075	.250	.440	.200
142-0711-881/886	.375	.047	.083	.075	.250	.440	.200
142-0701-881/886	.375	.031	.050	.045	.250	.440	.200

## SMA End Launch Specifications

### ELECTRICAL RATINGS

**Impedance:** 50 Ohms

**Frequency Range:** 0-18 GHz

**VSWR:** Dependent upon application

**Working Voltage** (VRMS max.): 335 @ Sea Level, 85 @ 70K Feet

**Dielectric Withstanding Voltage** (VRMS min. at sea level): 1000

**Corona Level** (Volts min. at 70,000 feet): 250

**Insulation Resistance:** 5000 megohms min

**Contact Resistance** (milliohms max.): 3.0 Initial, 4.0 after environmental

**RF High Potential Withstanding Voltage** (VRMS min. tested at 4 and 7 MHz): 670

### MECHANICAL RATINGS

**Engagement Design:** MIL-C-39012, Series SMA

**Engagement/Disengagement Force:** 2 inch-pounds max.

**Mating Torque:** 7 to 10 inch-pounds

**Coupling Proof Torque:** 15 inch-pounds min.

**Coupling Nut Retention:** 60 pounds min.

**Contact Retention Force:** 6 lbs min. axial force, 4 inch-ounce min. torque

**Durability:** 500 cycles min.

### ENVIRONMENTAL RATINGS:

(Meets or exceeds the applicable paragraph of MIL-C-39012)

**Temperature Range:** -65° to +165° C

**Thermal Shock:** MIL-STD-202, Method 107, Condition B

**Corrosion:** MIL-STD-202, Method 101, Condition B

**Shock:** MIL-STD-303, Method 213, Condition I

**Vibration:** MIL-STD-202, Method 204, Condition D

**Moisture Resistance:** MIL-STD-202, Method 106

### MATERIAL SPECIFICATIONS

**Bodies:** Brass per QQ-B-626, gold plated\* per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

**Contacts:** Male - brass per QQ-B-626, gold plated per MIL-G-45204 .00003" min.

Female - beryllium copper per QQ-C-530, gold plated per MIL-G-45204 .00003" min.

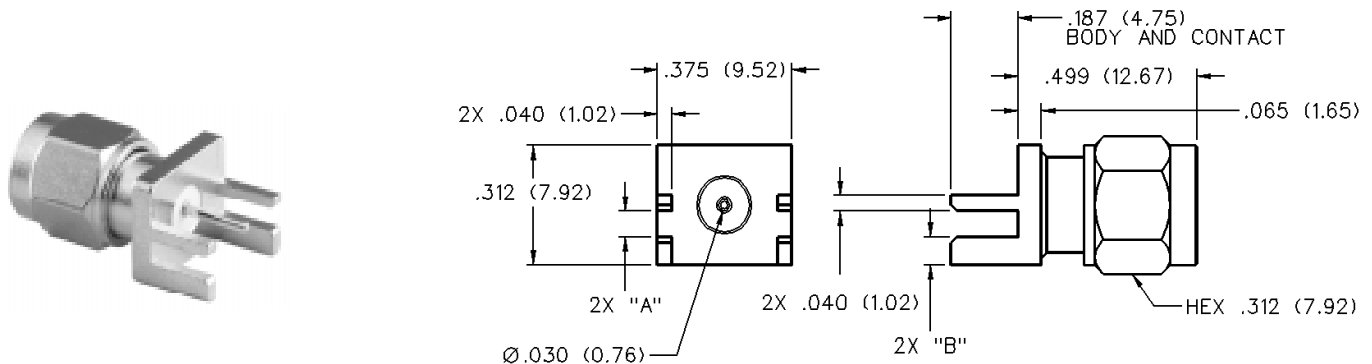
**Nut Retention Spring:** Beryllium copper per QQ-C-533. Unplated

**Insulators:** PTFE fluorocarbon per ASTM D 1710 and ASTM D 1457

**Mounting Hardware:** Brass per QQ-B-626 or QQ-B-613, gold plated per MIL-G-45204 .00001" min. or nickel plated per QQ-N-290

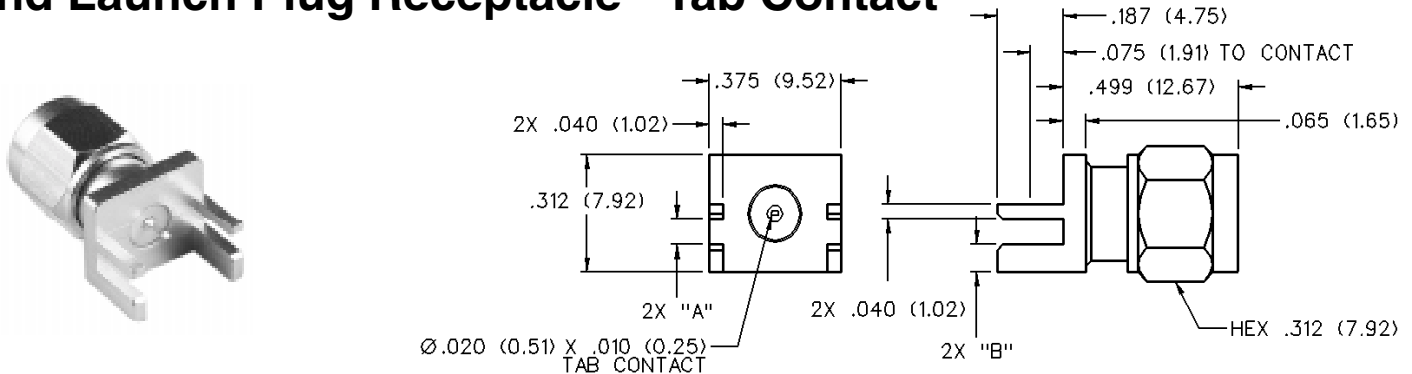
\*All gold plated parts include a .00005" min. nickel underplate barrier layer.

### End Launch Plug Receptacle - Round Contact



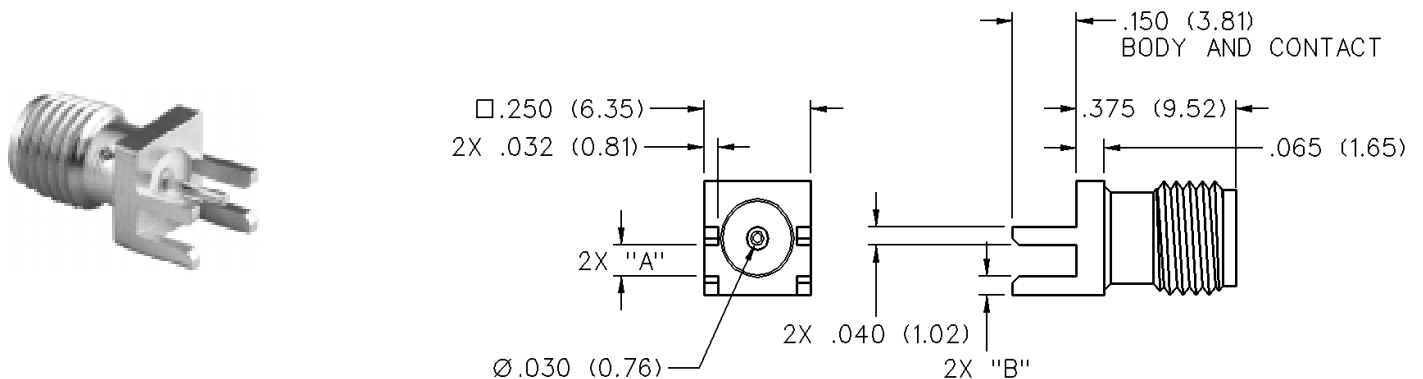
VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	.062 (1.57)	142-0801-801	142-0801-806	.068 (1.73)	.073 (1.85)
	.042 (1.07)	142-0801-821	142-0801-826	.048 (1.22)	.093 (2.36)

### End Launch Plug Receptacle - Tab Contact



VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	.062 (1.57)	142-0801-811	142-0801-816	.068 (1.73)	.083 (2.11)
	.042 (1.07)	142-0801-831	142-0801-836	.048 (1.22)	.103 (2.62)

### End Launch Jack Receptacle - Round Contact



VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	.062 (1.57)	142-0711-821	142-0711-826	.068 (1.73)	.042 (1.07)
	.042 (1.07)	142-0711-841	142-0711-846	.048 (1.22)	.062 (1.57)

*Coupling proof torque 8  
inch-pounds maximum  
without support wrench.*

# SMA - 50 Ohm Connectors

PC Mount

## End Launch Jack Receptacle - Round Contact

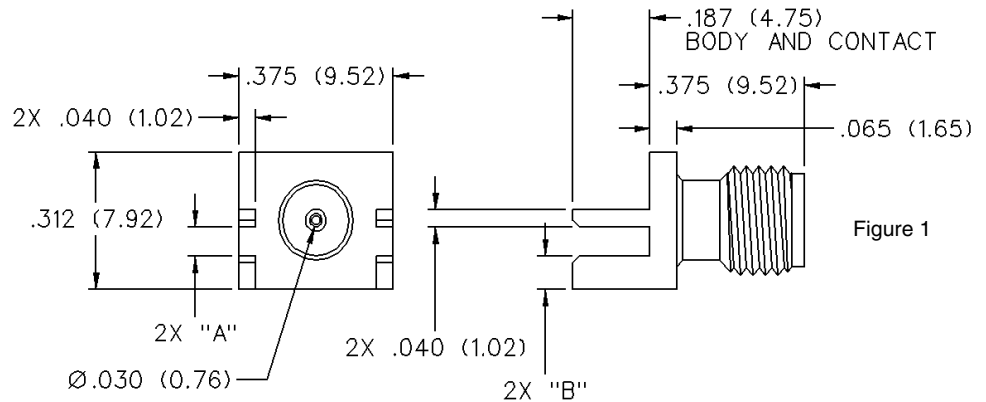


Figure 1

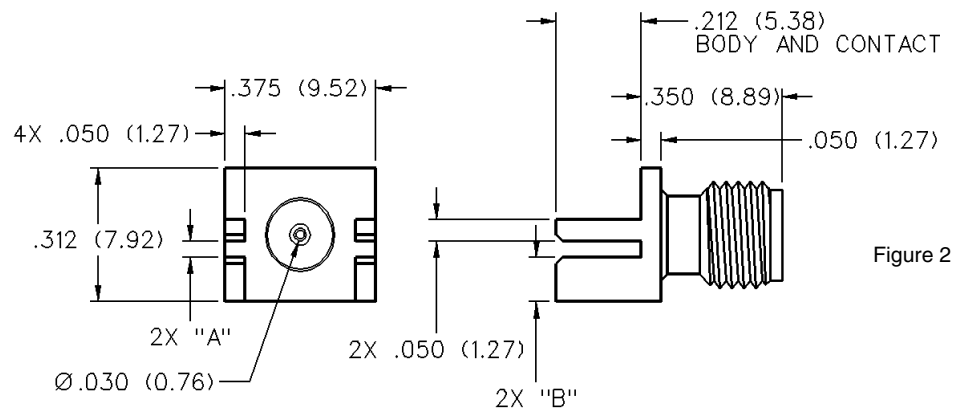
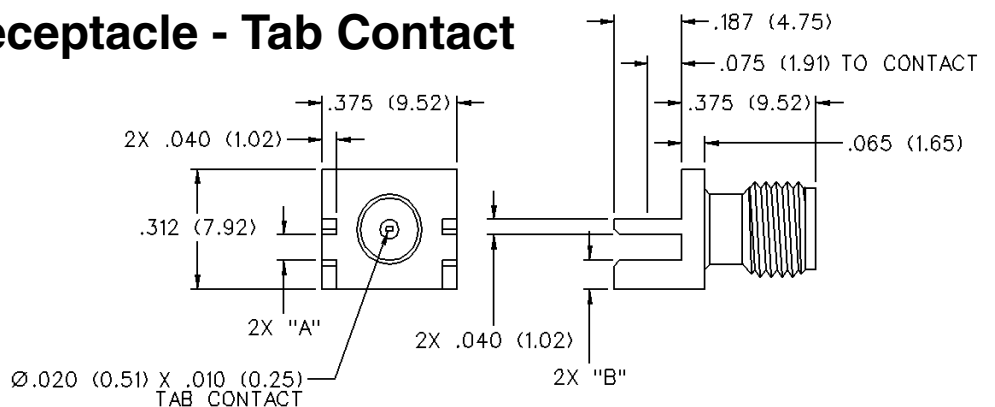


Figure 2

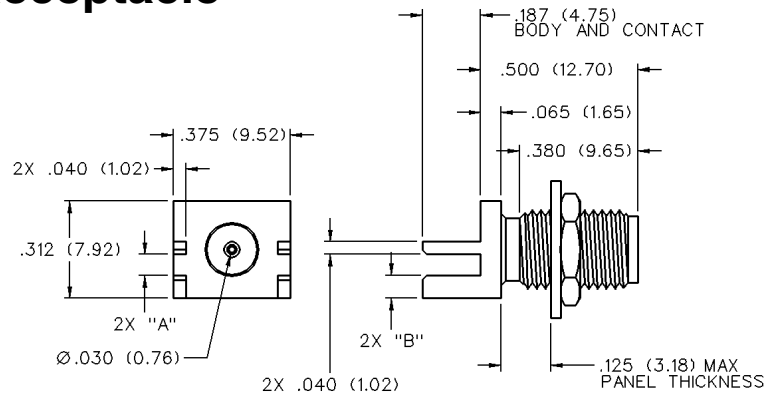
VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	NICKEL PLATED	"A"	"B"	FIGURE
VSWR: N/A 0-18 GHz	.062 (1.57)	142-0701-801	142-0701-806	.068 (1.73)	.073 (1.85)	1
	.042 (1.07)	142-0701-831	142-0701-836	.048 (1.22)	.093 (2.36)	1
	.031 (0.79)	142-0701-881	142-0701-886	.037 (0.94)	.104 (2.64)	2
	.047 (1.19)	142-0711-871	142-0711-876	.053 (1.35)	.088 (2.24)	1

## End Launch Jack Receptacle - Tab Contact



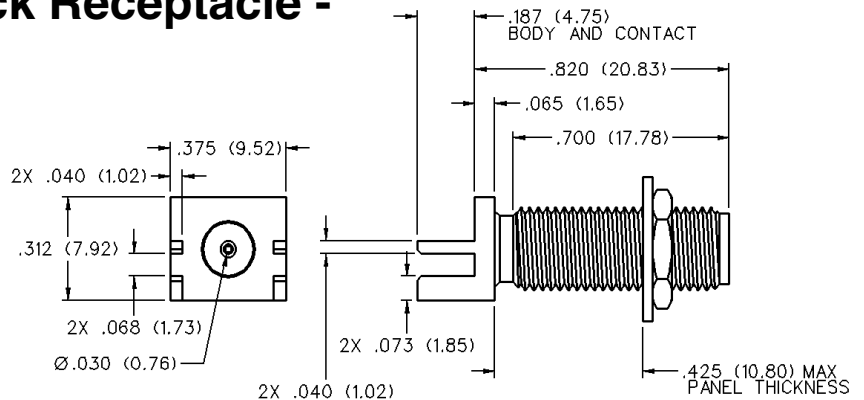
VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	.062 (1.57)	142-0701-851	142-0701-856	.068 (1.73)	.083 (2.11)
	.042 (1.07)	142-0701-841	142-0701-846	.048 (1.22)	.103 (2.62)
	.047 (1.19)	142-0711-881	142-0711-886	.053 (1.35)	.098 (2.24)

### End Launch Bulkhead Jack Receptacle - Round Contact



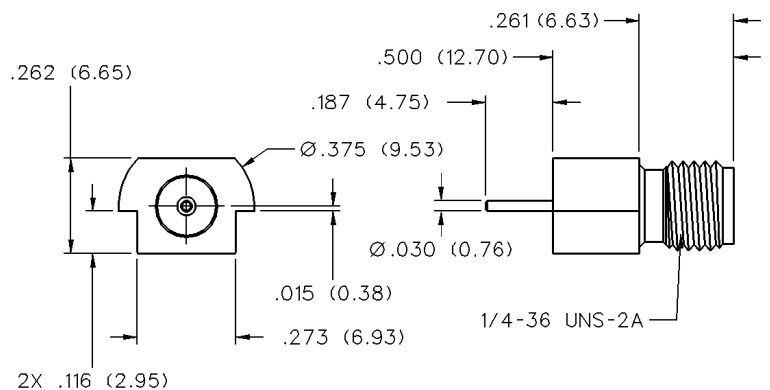
VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	.062 (1.57)	142-0701-871	142-0701-876	.068 (1.73)	.073 (1.85)
	.069 (1.75)	142-0721-841	142-0721-846	.075 (1.91)	.066 (1.68)
	.074 (1.88)	142-0721-871	142-0721-876	.080 (2.03)	.061 (1.55)

### End Launch Bulkhead Jack Receptacle - Round Contact



VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	.062 (1.57)	142-0711-811	142-0711-816

### End Launch Jack Receptacle - Surface Mount



VSWR & FREQ. RANGE	GOLD PLATED	PACKAGING
VSWR: N/A 0-18 GHz	142-0721-881	Stock
	142-0721-882	Tape and Reel 475 pcs/reel

Call factory for recommended land pattern.



# SMA - 50 Ohm Connectors

Field Replaceable - Application Notes

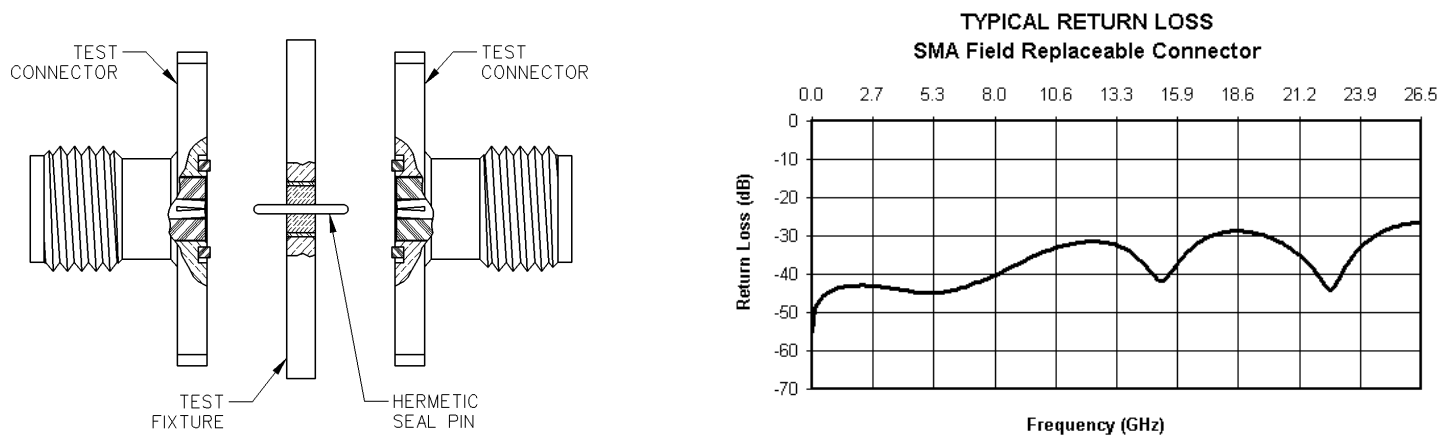
**JOHNSON**  
Components®

INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

The field replaceable style of connector is known by many names in the industry, such as MIC launcher, hermetic seal launcher, spark plug launcher, etc. Some types, such as those known as “spark plugs”, have the hermetic seal incorporated into the connector. These types require special welding to install and can not be replaced without destroying the hermeticity of the circuit housing. True field replaceable connectors, such as those manufactured by Johnson Components®, are easy to install and replace. Because the hermetic seal is not incorporated into the connector design, the connector can be removed and replaced without destroying the hermetic seal or the hermeticity of the circuit housing.

All of the above mentioned connector types perform the same basic function - creating a transition from microstrip circuitry to a coaxial transmission line. Whenever possible, the hermetic seal pin diameter should be chosen as close as possible to the microstrip trace width. For optimum electrical performance, the transition from the hermetic seal to the microstrip trace must be properly compensated. Compensation involves adjusting the microstrip trace width to minimize any impedance discontinuities found in the transition area.

The plot shown below is representative of the typical return loss of an Johnson Components® field replaceable connector. To produce the data shown below, a test fixture is created using the appropriate Johnson Components® hermetic seal. The fixture consists of a suitably thick spacer plate with the hermetic seal mounted flush to both surfaces. Two connectors are mounted back to back around the fixture and the VSWR of this test assembly is measured. The return loss data shown is equivalent to the square root of the measured VSWR of the test assembly. Since the connectors tested are of identical design, it can be stated with fair accuracy that the data shown represents the response of a single field replaceable connector and its transition to the hermetic seal.

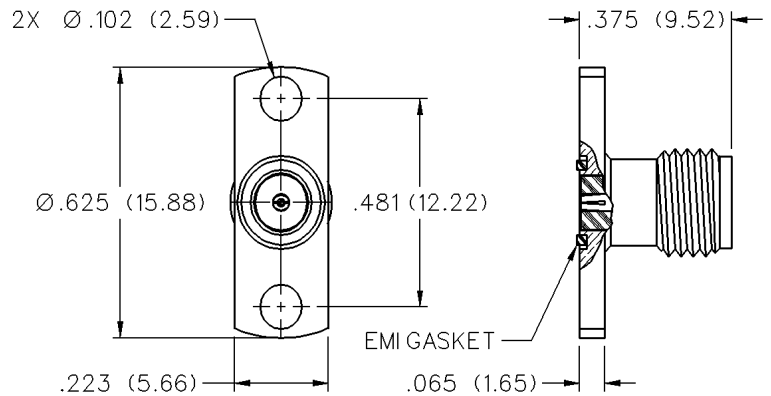


Although Johnson Components® does not publish a VSWR specification for field replaceable connectors, typical connector VSWR can be expected to be less than  $1.1 + .01f$  ( $f$  in GHz). A VSWR specification is not stated because an industry standard method for testing field replaceable connectors does not exist. The actual performance of the connector is dependent upon the application for the following reasons:

1. The choice of hermetic seal to be used by the customer is not specified by the connector manufacturer. Hermetic seals produced by different manufacturers will not have the same electrical characteristics. For optimum electrical performance, Johnson Components® recommends the use of our standard 142-1000-001, 002, 003 and 004 hermetic seals for pin diameters of .012 (0.30), .015 (0.38), .018 (0.46) and .020 (0.51). Custom hermetic seal configurations can be quoted.
2. It is recommended that the hermetic seal be mounted flush with the circuit housing. Tolerance variations between the hermetic seal and machined housing do not always guarantee an optimum transition to the connector. Some manufacturers recommend an additional counterbore in the circuit housing to accommodate a solder washer during installation of the seal. Johnson Components® does not recommend this type of installation because if the counterbore is not completely filled with solder, electrical discontinuities may be created.
3. The transition between the hermetic seal pin and the microstrip trace will affect electrical performance, as stated above. Several different methods of hermetic seal mounting and seal pin to microstrip trace attachment are used in the industry. Johnson Components® can not recommend one method over the other as this is dependent upon the customer's application.

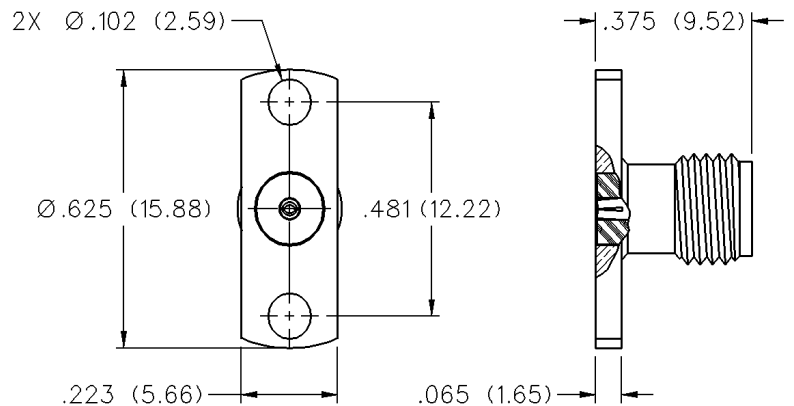
As always, quotes for non-standard field replaceable connectors and/or hermetic seals are welcome.

## 2-Hole Flange Mount Jack Receptacle With EMI Gasket



ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.012 (0.30)	0-26.5 GHz	142-1701-601	142-1701-606
.015 (0.38)	0-26.5 GHz	142-1701-611	142-1701-616
.018 (0.46)	0-26.5 GHz	142-1701-621	142-1701-626

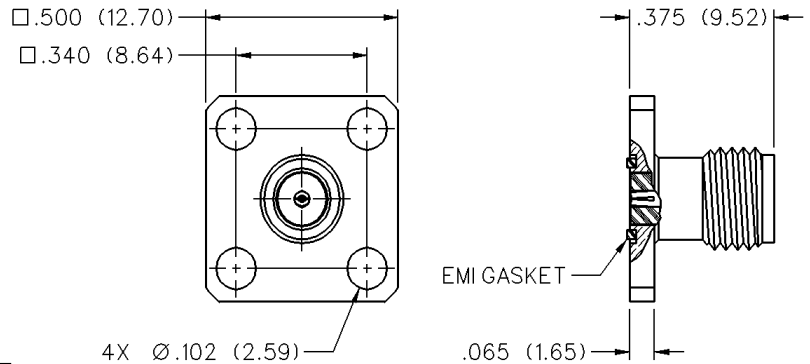
## 2-Hole Flange Mount Jack Receptacle Without EMI Gasket



ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.020 (0.51)	0-26.5 GHz	142-1701-631	142-1701-636
.036 (0.91)	0-26.5 GHz	142-1701-641	142-1701-646

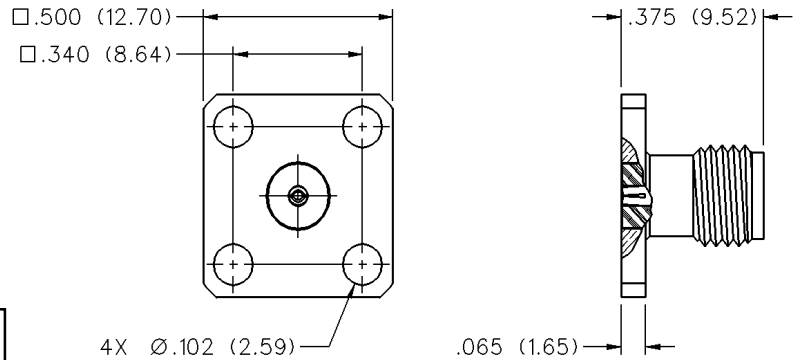
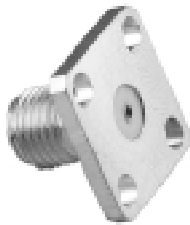


## 4-Hole Flange Mount Jack Receptacle With EMI Gasket



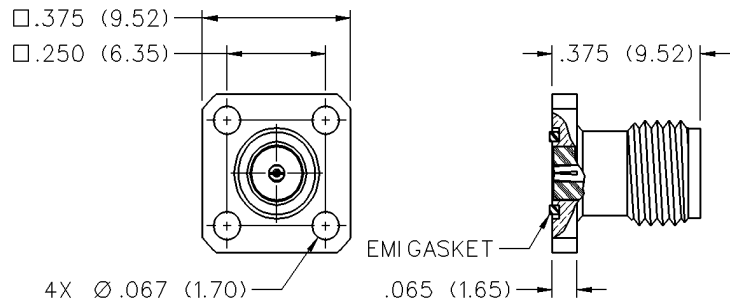
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.012 (0.30)	0-26.5 GHz	142-1701-501	142-1701-506
.015 (0.38)	0-26.5 GHz	142-1701-511	142-1701-516
.018 (0.46)	0-26.5 GHz	142-1701-521	142-1701-526

## 4-Hole Flange Mount Jack Receptacle Without EMI Gasket



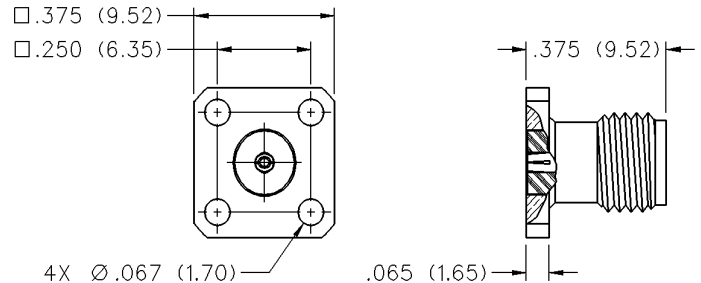
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.020 (0.51)	0-26.5 GHz	142-1701-531	142-1701-536
.036 (0.91)	0-26.5 GHz	142-1701-541	142-1701-546

## 4-Hole Flange Mount Jack Receptacle With EMI Gasket



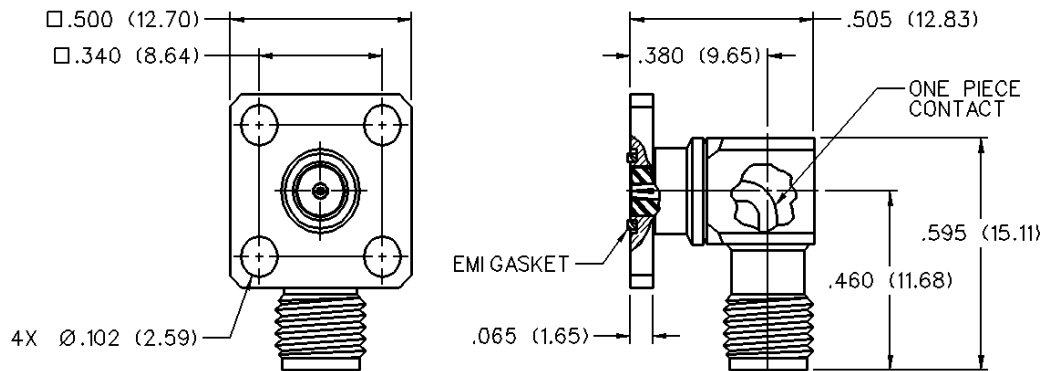
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.012 (0.30)	0-26.5 GHz	142-1701-551	142-1701-556
.015 (0.38)	0-26.5 GHz	142-1701-561	142-1701-566
.018 (0.46)	0-26.5 GHz	142-1701-571	142-1701-576

## 4-Hole Flange Mount Jack Receptacle Without EMI Gasket



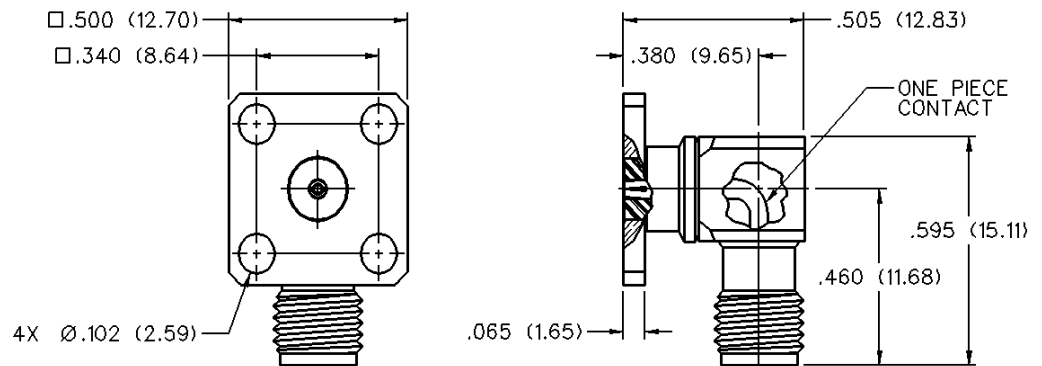
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.020 (0.51)	0-26.5 GHz	142-1701-581	142-1701-586
.036 (0.91)	0-26.5 GHz	142-1701-591	142-1701-596

## 4-Hole Right Angle Flange Mount Jack Receptacle With EMI Gasket



ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.015 (0.38)	0-26.5 GHz	142-1711-511	142-1711-516
.018 (0.46)	0-26.5 GHz	142-1711-521	142-1711-526

## SMA 4-Hole RA Flange Mount Jack Receptacle Without EMI Gasket



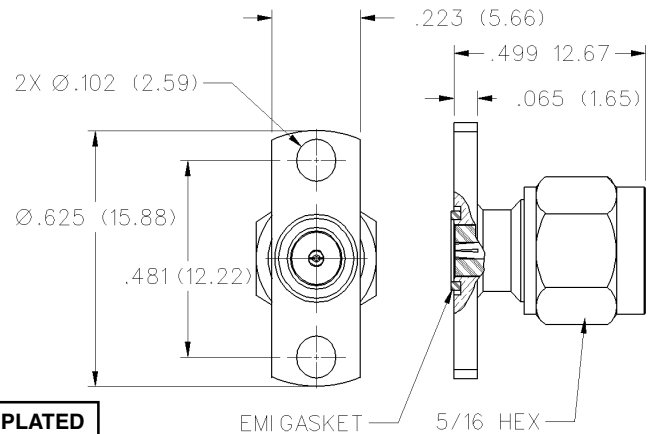
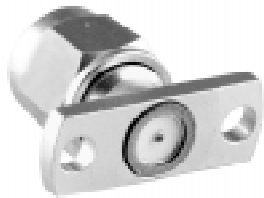
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.020 (0.51)	0-26.5 GHz	142-1711-531	142-1711-536

# SMA - 50 Ohm Connectors

Field Replaceable

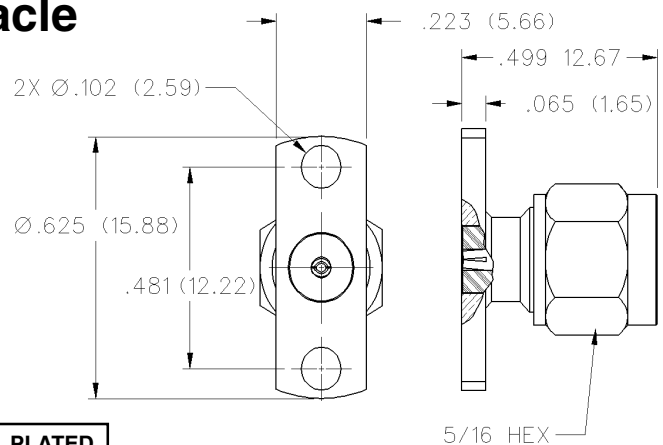
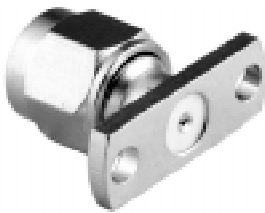
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## 2-Hole Flange Mount Plug Receptacle With EMI Gasket



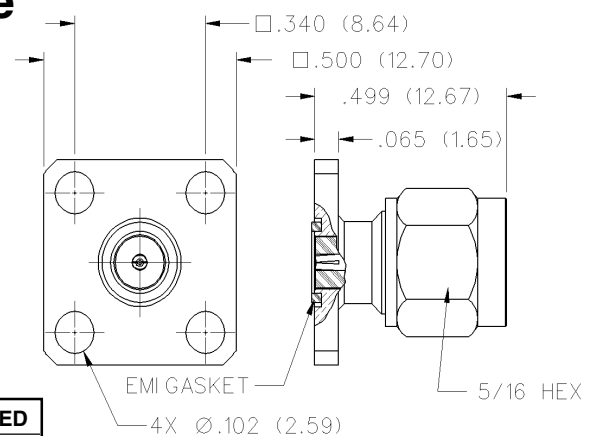
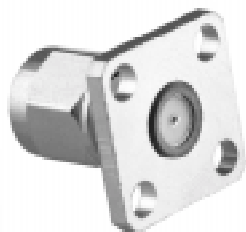
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.012 (0.30)	0-26.5 GHz	142-1801-601	142-1801-606
.015 (0.38)	0-26.5 GHz	142-1801-611	142-1801-616
.018 (0.46)	0-26.5 GHz	142-1801-621	142-1801-626

## 2-Hole Flange Mount Plug Receptacle Without EMI Gasket



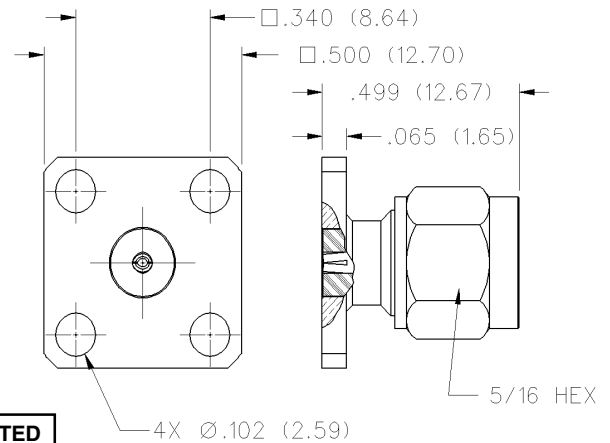
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.020 (0.51)	0-26.5 GHz	142-1801-631	142-1801-636
.036 (0.91)	0-26.5 GHz	142-1801-641	142-1801-646

## 4-Hole Flange Mount Plug Receptacle With EMI Gasket



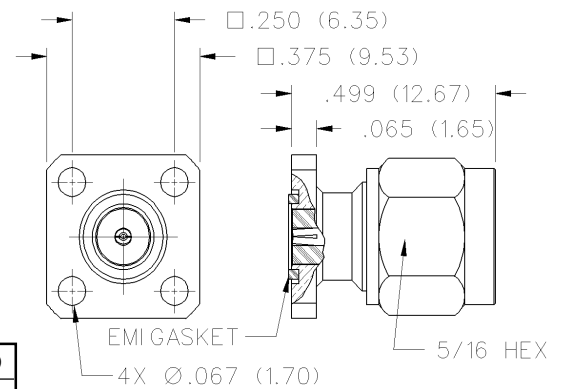
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.012 (0.30)	0-26.5 GHz	142-1801-501	142-1801-506
.015 (0.38)	0-26.5 GHz	142-1801-511	142-1801-516
.018 (0.46)	0-26.5 GHz	142-1801-521	142-1801-526

### 4-Hole Flange Mount Plug Receptacle Without EMI Gasket



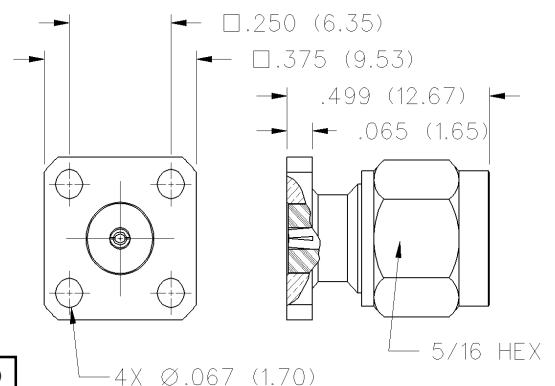
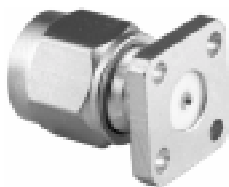
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.020 (0.51)	0-26.5 GHz	142-1801-531	142-1801-536
.036 (0.91)	0-26.5 GHz	142-1801-541	142-1801-546

### 4-Hole Flange Mount Plug Receptacle With EMI Gasket



ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.012 (0.30)	0-26.5 GHz	142-1801-551	142-1801-556
.015 (0.38)	0-26.5 GHz	142-1801-561	142-1801-566
.018 (0.46)	0-26.5 GHz	142-1801-571	142-1801-576

### 4-Hole Flange Mount Plug Receptacle Without EMI Gasket



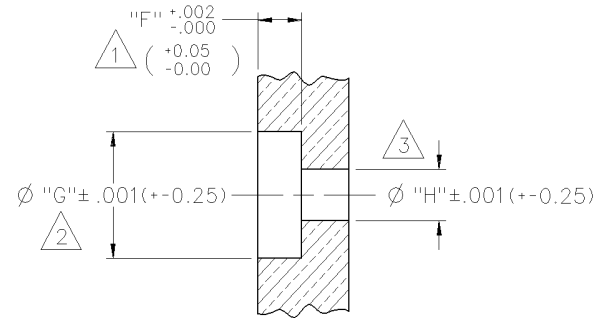
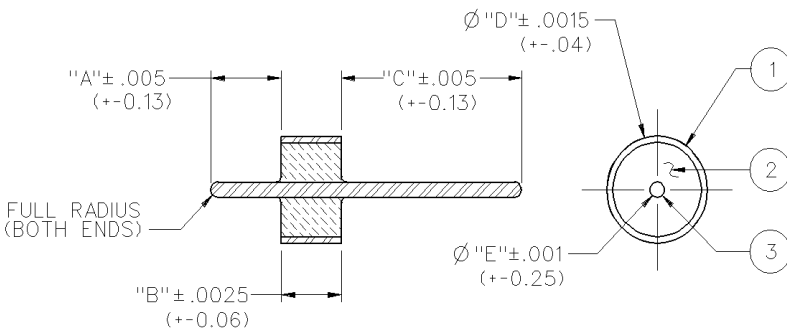
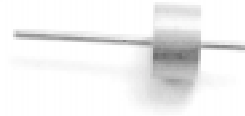
ACCEPTS PIN SIZE	FREQUENCY RANGE	GOLD PLATED	NICKEL PLATED
.020 (0.51)	0-26.5 GHz	142-1801-581	142-1801-586
.036 (0.91)	0-26.5 GHz	142-1801-591	142-1801-596

# SMA - 50 Ohm Connectors

Field Replaceable

INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## Hermetic Seal Feedthrough



Recommended Mounting Hole Detail

PART NUMBER	ITEM 1 OUTER RING	ITEM 2 INSULATOR	ITEM 3 PIN	"A"	"B"	"C"	"D"	"E"
142-1000-001	Kovar Gold pl .00005 min over Nickel pl .000005 min.	Glass Corning 7052 or equivalent	Kovar Gold pl .00005 min over Nickel pl .000005 min	.070 (1.78)	.0625 (1.59)	.180 (4.57)	.0985 (2.50)	.012 (.30)
142-1000-002	Kovar Gold pl .00005 min over Nickel pl .000005 min.	Glass Corning 7070 or equivalent	Kovar Gold pl .00005 min over Nickel pl .000005 min	.072 (1.83)	.0625 (1.59)	.180 (4.57)	.0985 (2.50)	.015 (.38)
142-1000-003	Kovar Gold pl .00005 min over Nickel pl .000005 min.	Glass Corning 7070 or equivalent	Kovar Gold pl .00005 min over Nickel pl .000005 min	.072 (1.83)	.0600 (1.52)	.180 (4.57)	.1100 (2.79)	.018 (.46)
142-1000-004	Kovar Gold pl .00005 min over Nickel pl .000005 min.	Glass Corning 7052 or equivalent	Kovar Gold pl .00005 min over Nickel pl .000005 min	.070 (1.78)	.0600 (1.52)	.203 (5.16)	.1580 (4.01)	.020 (.51)

### Mounting Hole Dimensions

PART NUMBER	PIN DIAMETER	"F"	"G"	AIR	TEFLON
				"H"	"H"
142-1000-001	.012 (0.30)	.063 (1.60)	.102 (2.59)	.028 (0.71)	.039 (0.99)
142-1000-002	.015 (0.38)	.063 (1.60)	.102 (2.59)	.035 (0.89)	.049 (1.24)
142-1000-003	.018 (0.46)	.060 (1.52)	.114 (2.90)	.042 (1.07)	.059 (1.50)
142-1000-004	.020 (0.51)	.060 (1.52)	.162 (4.11)	.046 (1.17)	.065 (1.65)

- Notes:**
1. The hermetic seal should be mounted as flush as possible with the housing. Excessive recession will create a high impedance air gap which degrades electrical performance.
  2. The use of an additional counterbore to accommodate a solder ring for seal mounting is not recommended. A slight chamfer may be used if care is taken to completely fill the area with solder - **avoid air gaps**.
  3. Dimensions shown are given to achieve 50 Ohms with either air or a teflon insulator. A teflon insulator may be helpful in supporting small pin diameters.

**Electrical:**  
 Impedance: 50 Ohms  
 Frequency Range: DC to 26.5 GHz  
 VSWR: Dependent upon application  
 Working Voltage: 250 Vrms max at sea level  
 Dielectric Withstanding Voltage: 500 Vrms min at sea level  
 Insulation Resistance: 5000 Megohm min  
 Insertion Loss: .015F dB max (F in GHz)

**Environmental:**  
 Hermeticity:  $1 \times 10^{-8}$  cc/sec at one atmosphere  
 Solderability: MIL-STD-202, Method 209  
 Operating Temperature: -55°C to 165°C

## Epoxy Staked Feedthrough

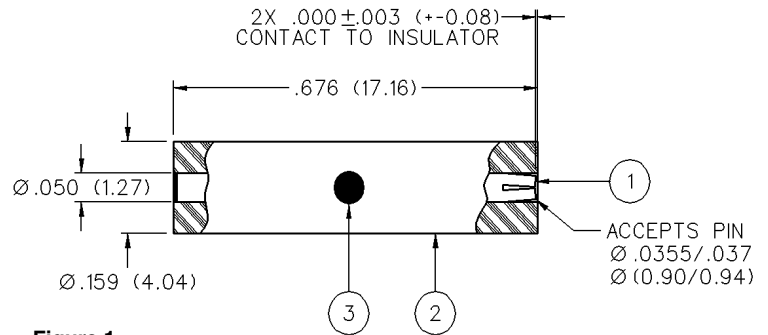


Figure 1

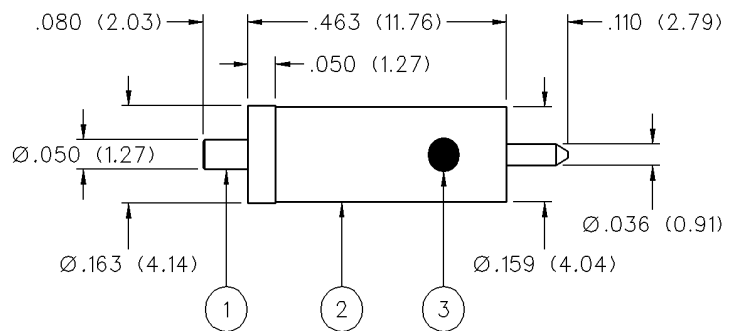


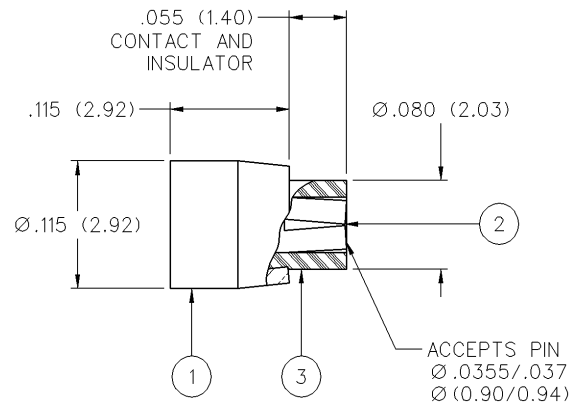
Figure 2

PART NUMBER	ITEM 1 CONTACT	ITEM 2 INSULATOR	ITEM 3 STAKE	FIGURE
142-1000-012	Beryllium Copper Gold pl .00005 min over Nickel pl .000005 min over Copper pl .00005 min	Teflon	Epoxy	1
142-1000-018	Brass Gold pl .00005 min over Nickel pl .000005 min over Copper pl .00005 min	Teflon	Epoxy	2

**Specifications:**

Impedance: 50 Ohms Nominal  
Frequency Range: DC to 26.5 GHz  
VSWR: Dependent upon application  
Working Voltage: 335 Vrms max at sea level  
Dielectric Withstanding Voltage: 1000 Vrms min at sea level  
Insulation Resistance: 5000 Megohm min  
Contact to Insulator Retention: 6 lb. min  
Operating Temperature: -55° C to + 165° C

## PC Board Feedthrough



PART NUMBER	ITEM 1 CONTACT (END CAP)	ITEM 2 CONTACT (CENTER)	ITEM 3 INSULATOR
142-1000-022	Brass Gold pl .00001 min over Nickel pl .000005 min over Copper pl .00005 min	Beryllium Copper Gold pl .00005 min over Nickel pl .000005 min over Copper pl .00005 min	Teflon

**Application:**

Lower frequency feedthrough.  
Solder end cap to one side of PC board.  
Contact passes through board and is isolated from board by Teflon® insulator.

## ELECTRICAL RATINGS

**Impedance:** 50 ohms

**Frequency Range:** Flexible cable connectors ..... 0-12.4 GHz  
Uncabled receptacles ..... 0-18.0 GHz

**VSWR:** (f = GHz)      Straight Cabled Connectors      RA Cabled Connectors  
RG-316 ..... 1.15 + .02f      1.15 + .03f  
RG-58 ..... 1.15 + .01f      1.15 + .02f

Uncabled receptacles ..... N/A

**Working Voltage:** (Vrms maximum)

### Connectors for Cable Type

	Sea Level	70K Feet
RG-316	250	65
RG-58, uncabled receptacles	335	85

### Dielectric Withstanding Voltage:

 (VRMS minimum at sea level)

Connectors for RG-316	750
Connectors for RG-58, uncabled receptacles	1000

### Corona Level:

 (Volts minimum at 70,000 feet)†

Connectors for RG-316	190
Connectors for RG-58, uncabled receptacles	250

### Insertion Loss:

 (dB maximum)

Straight flexible cable connectors	0.06 √f (GHz), tested at 6 GHz
Right angle flexible cable connectors	0.15 √f (GHz), tested at 6 GHz
Uncabled receptacles	N/A

### Insulation Resistance:

 5000 megohms minimum

### Contact Resistance:

 (milliohms maximum)

	Initial	After Environmental
Center contact (straight cabled connectors, uncabled receptacles) ...	3.0	4.0
Center contact (right angle cabled connectors) .....	4.0	6.0
Outer contact (all connectors) .....	2.0	N/A
Braid to body .....	0.5	N/A

### RF Leakage:

 (dB minimum, tested at 2.5 GHz)

Flexible cable connectors	-60 dB
Uncabled receptacles	N/A

### RF High Potential Withstanding Voltage:

 (Vrms minimum, tested at 4 and 7 MHz)†

Connectors for RG-316	500
Connectors for RG-58, uncabled receptacles	670

## MECHANICAL RATINGS

**Engagement Design:** MIL-STD-348, Series SMA

**Engagement/Disengagement Force:** 2 inch-pounds maximum

**Mating Torque:** 7 to 10 inch-pounds

**Coupling Proof Torque:** 15 inch-pounds minimum

**Coupling Nut Retention:** 60 pounds minimum

**Contact Retention:** 6 lbs. minimum axial force (captivated contacts)  
4 inch-ounce minimum torque (uncabled receptacles)

### Cable Retention:

	Axial Force*(lbs)	Torque (in-oz)
Connectors for RG-316	20	N/A
Connectors for RG-58	40	N/A

\*Or cable breaking strength whichever is less.

**Durability:** 500 cycles minimum

## ENVIRONMENTAL RATINGS

 (Meets or exceed the applicable paragraph of MIL-C-39012)

**Temperature Range:** - 65°C to + 165°C

**Thermal Shock:** MIL-STD-202, Method 107, Condition B

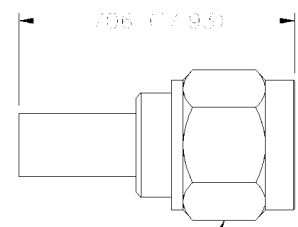
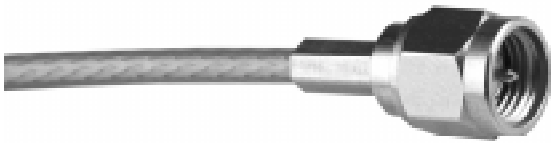
**Corrosion:** MIL-STD-202, Method 101, Condition B

**Shock:** MIL-STD-202, Method 213, Condition I

**Vibration:** MIL-STD-202, Method 204, Condition D

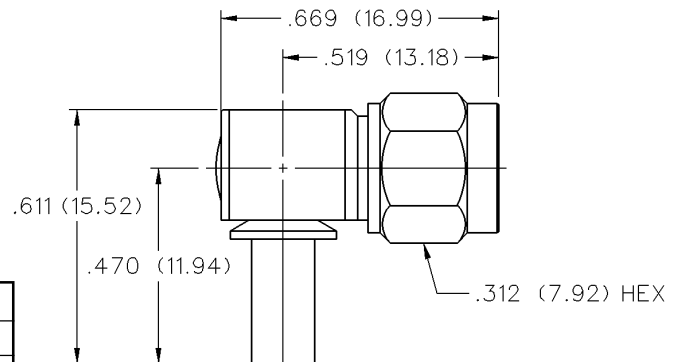
**Moisture Resistance:** MIL-STD-202, Method 106

## Straight Crimp Type Plug (3-piece) - Captivated Contact



CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED
RG-316/u, 188, 174	1.15 + .02f (GHz) 0-12.4 GHz	142-9403-011
RG-316 DS, 188 DS	1.15 + .02f (GHz) 0-12.4 GHz	142-9404-011
RG-58/u, 141	1.15 + .01f (GHz) 0-12.4 GHz	142-9407-001

## Right Angle Crimp Type Plug - Captivated Contact



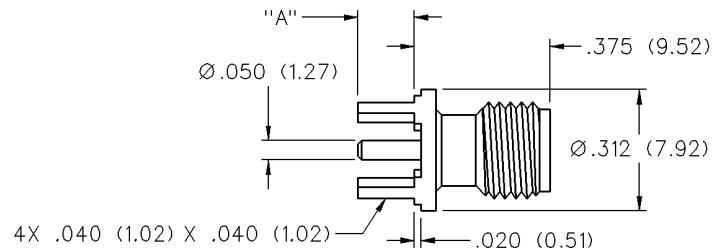
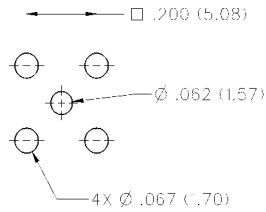
CABLE TYPE	VSWR & FREQ. RANGE	GOLD PLATED
RG-316/u, 188, 174	1.15 + .03f (GHz) 0-12.4 GHz	142-9403-101
RG-316 DS, 188 DS	1.15 + .03f (GHz) 0-12.4 GHz	142-9404-101
RG-58/u, 141	1.15 + .02f (GHz) 0-12.4 GHz	142-9407-101

# SMA Non-Magnetic RF Connectors

PC Mount

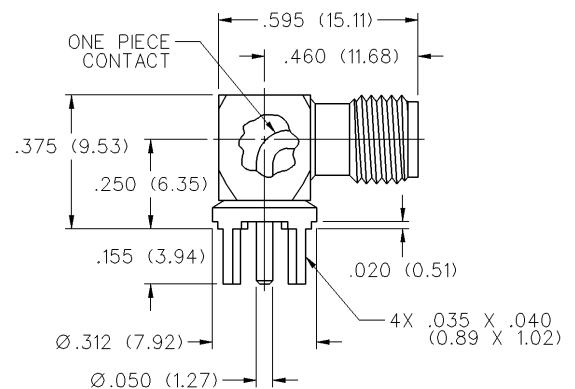
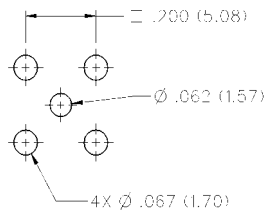
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## Straight Jack Receptacle



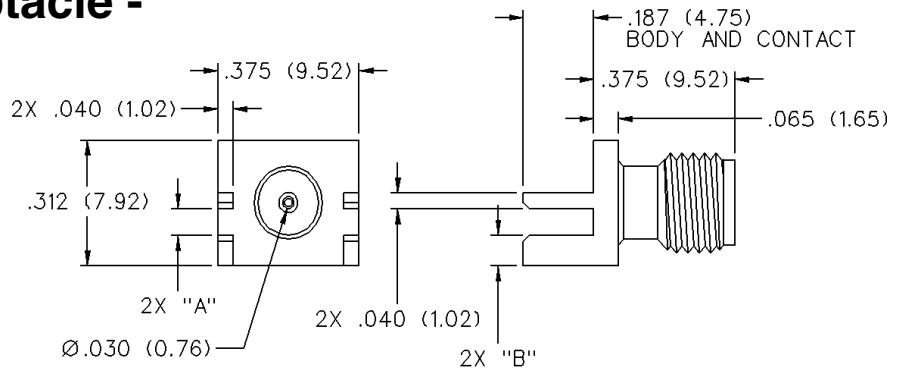
VSWR & FREQ. RANGE	GOLD PLATED	"A"
VSWR: N/A 0-18 GHz	142-9701-201	.155 (3.94)
VSWR: N/A 0-18 GHz	142-9701-211	.110 (2.79)

## Right Angle Jack Receptacle



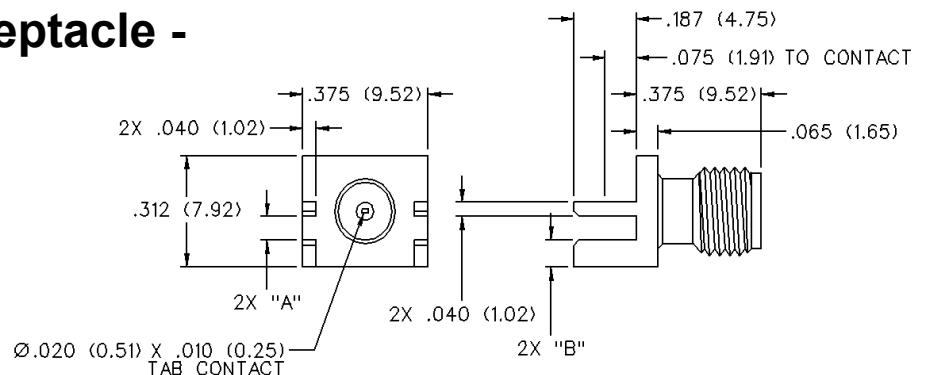
VSWR & FREQ. RANGE	GOLD PLATED
VSWR: N/A 0-18 GHz	142-9701-301

## End Launch Jack Receptacle - Round Contact



VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	.062 (1.57)	142-9701-801	.068 (1.73)	.073 (1.85)

## End Launch Jack Receptacle - Tab Contact



VSWR & FREQ. RANGE	BOARD THICKNESS	GOLD PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	.062 (1.57)	142-9701-811	.068 (1.73)	.083 (2.11)



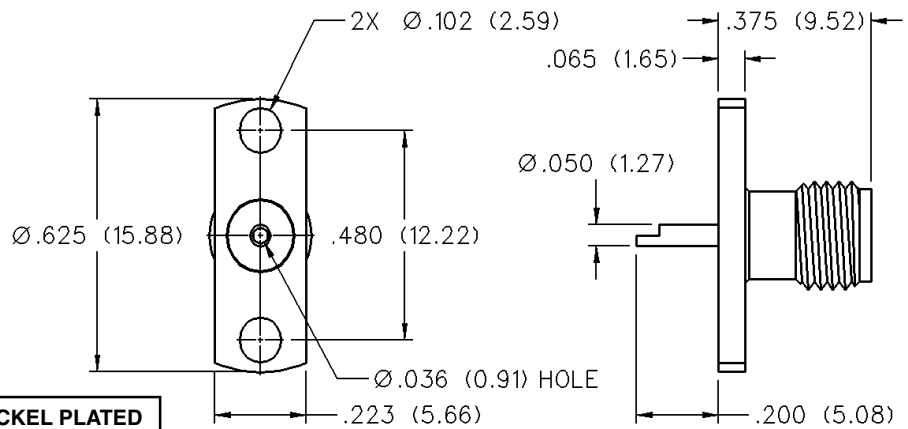
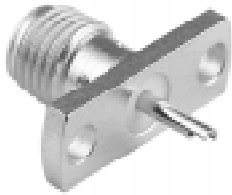
# SMA - 50 Ohm Connectors

Panel Mount



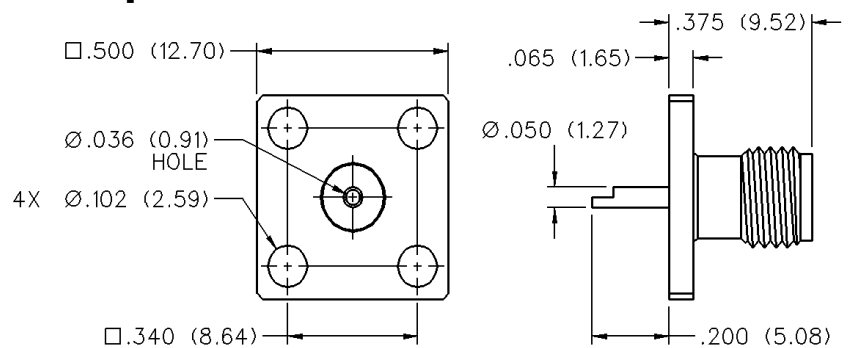
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## 2-Hole Flange Mount Jack Receptacle - Flush Dielectric



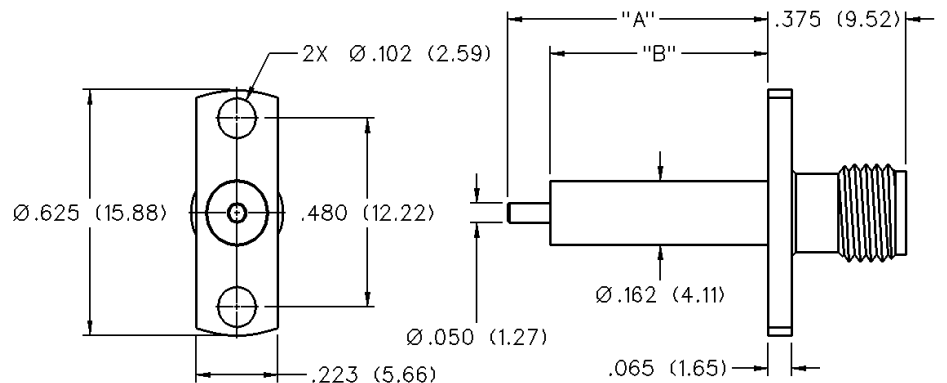
VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-621	142-0701-626

## 4-Hole Flange Mount Jack Receptacle - Flush Dielectric



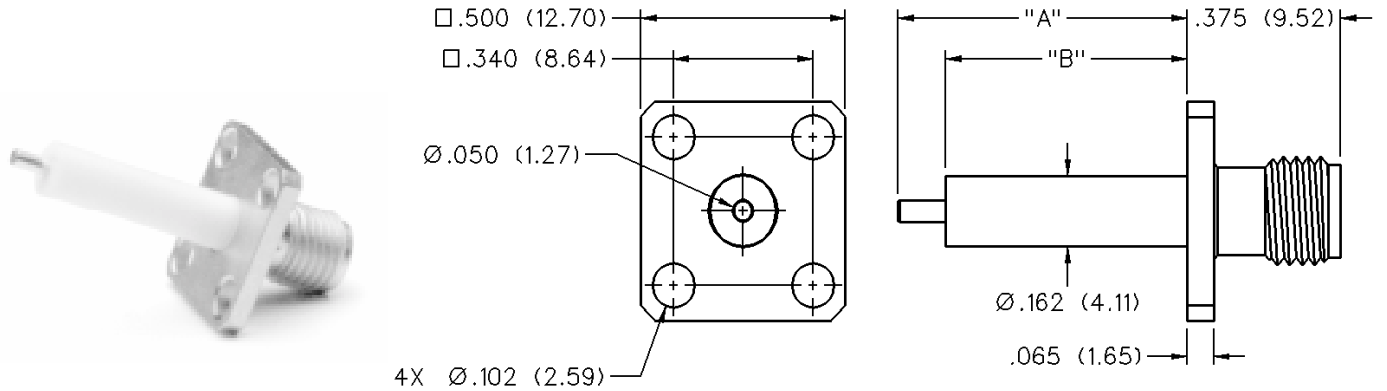
VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-631	142-0701-636

## 2-Hole Flange Mount Jack Receptacle - Extended Dielectric



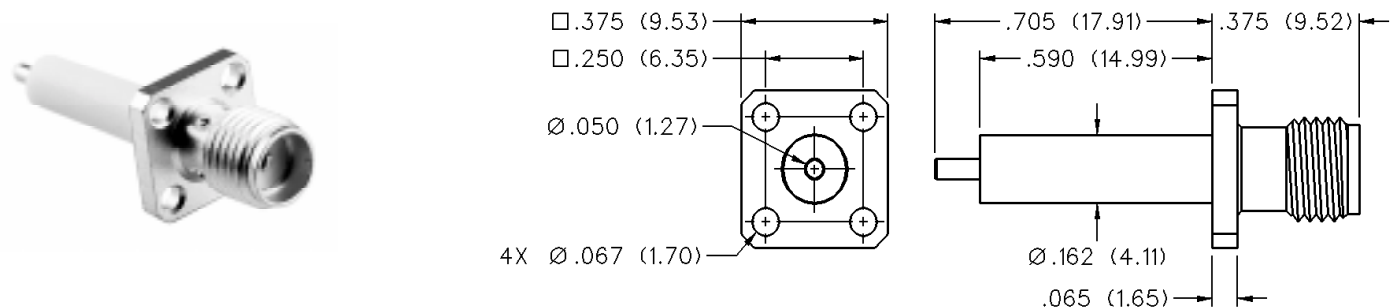
VSWR & FREQ. RANGE	PRODUCT SERIES	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: 1.15 + .02 f (GHz) 0-18 GHz	Brass	142-1701-131	142-1701-136	.705 (17.91)	.590 (14.99)
		142-1701-031	142-1701-036	.240 (6.10)	.180 (4.57)

### 4-Hole Flange Mount Jack Receptacle - Extended Dielectric



VSWR & FREQ. RANGE	PRODUCT SERIES	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: 1.15 + .02 f (GHz) 0-18 GHz	Brass	142-1701-121	142-1701-126	.705 (17.91)	.590 (14.99)
		142-1701-041	142-1701-046	.190 (4.83)	.095 (2.41)

### 4-Hole Flange Mount Jack Receptacle - Extended Dielectric



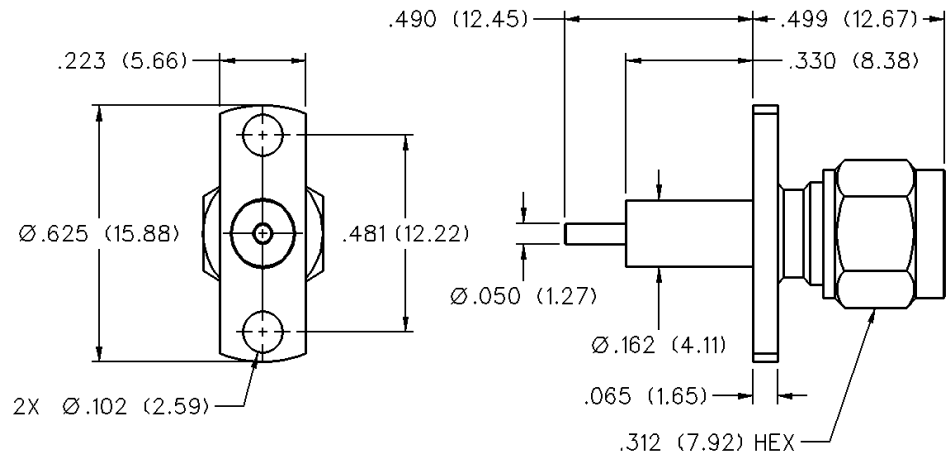
VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: 1.15 + .02 f (GHz) 0-18 GHz	142-1701-011	142-1701-016

# SMA - 50 Ohm Connectors

Panel Mount

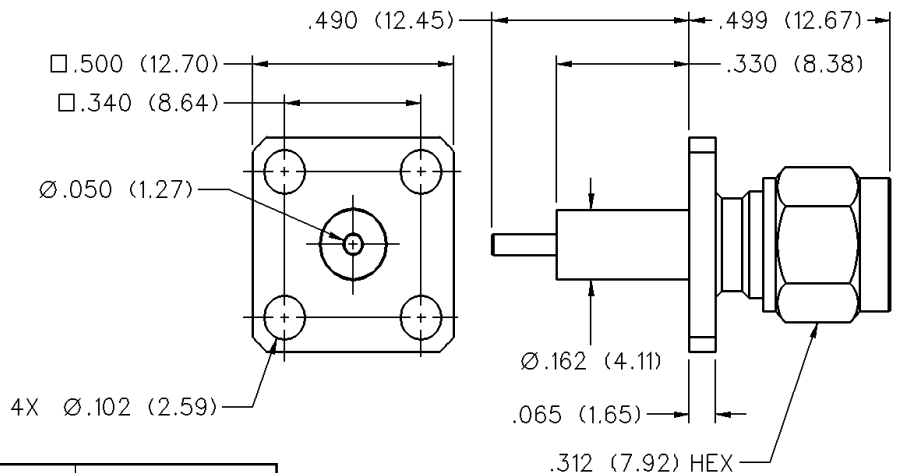
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## 2-Hole Flange Mount Plug Receptacle - Extended Dielectric



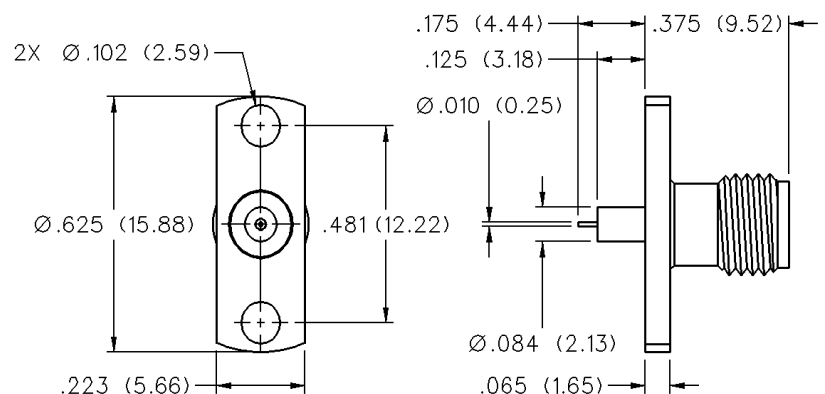
VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: 1.15 + .02 f (GHz) 0-18 GHz	142-1801-041	142-1801-046

## 4-Hole Flange Mount Plug Receptacle - Extended Dielectric



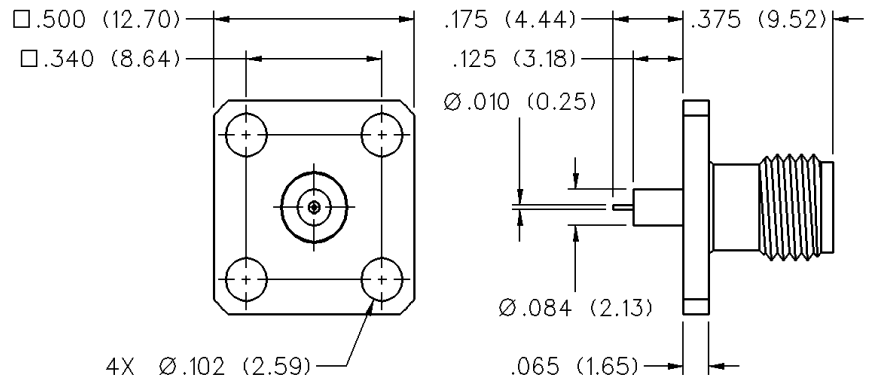
VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: 1.15 + .02 f (GHz) 0-18 GHz	142-1801-031	142-1801-036

## 2-Hole Flange Mount Jack Receptacle - Extended Dielectric



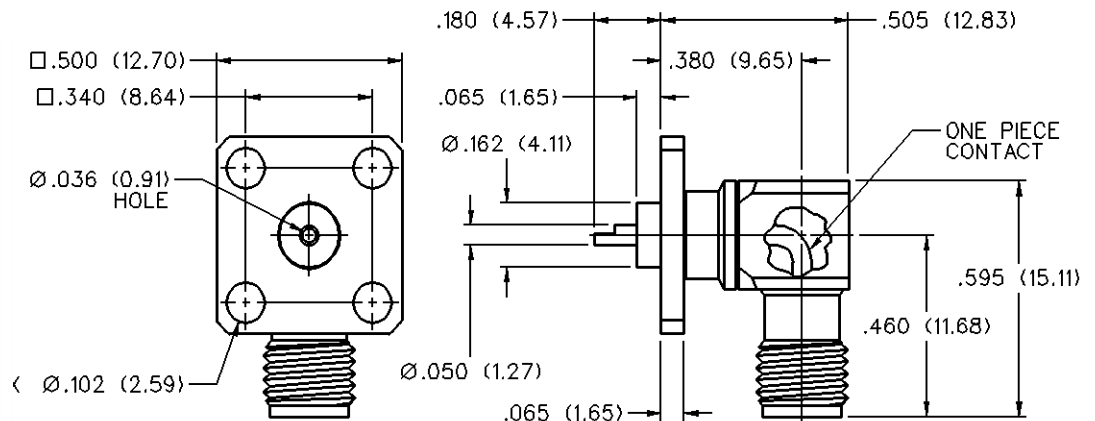
GOLD PLATED	NICKEL PLATED
142-1701-201	142-1701-206

### 4-Hole Flange Mount Jack Receptacle - Extended Dielectric



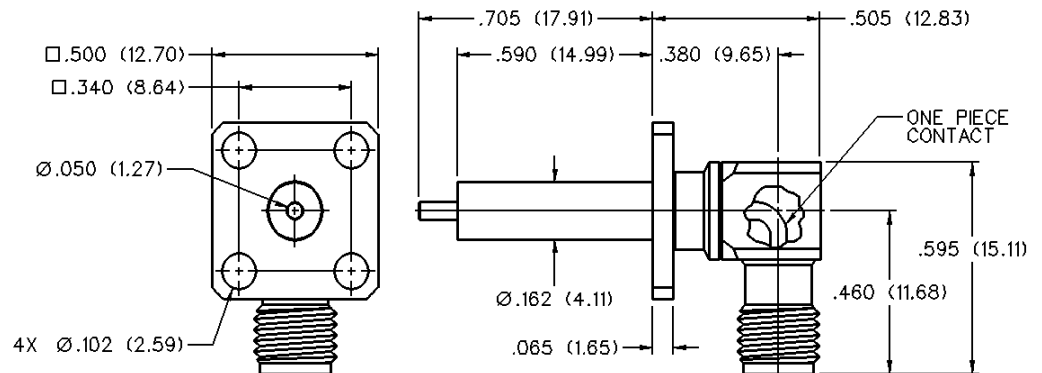
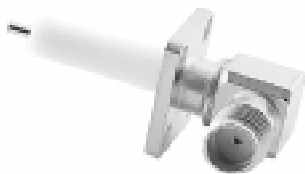
GOLD PLATED	NICKEL PLATED
142-1701-191	142-1701-196

### 4-Hole Right Angle Flange Mount Jack Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-701	142-0701-706

### 4-Hole RA Flange Mount Jack Receptacle - Extended Dielectric

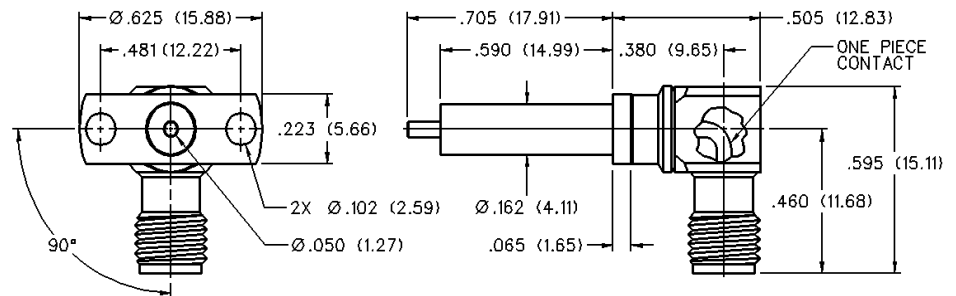


GOLD PLATED	NICKEL PLATED
142-1711-001	142-1711-006

# SMA - 50 Ohm Connectors

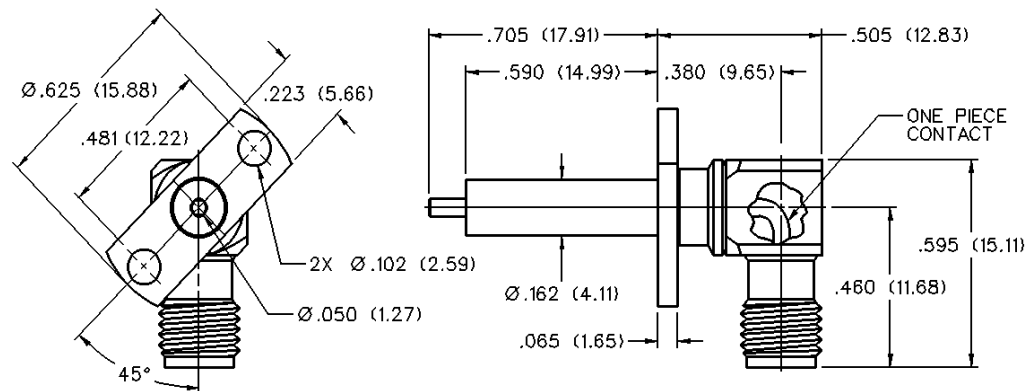
Panel Mount

## 2-Hole RA Flange Mount Jack Receptacle - Extended Dielectric 90° Orientation



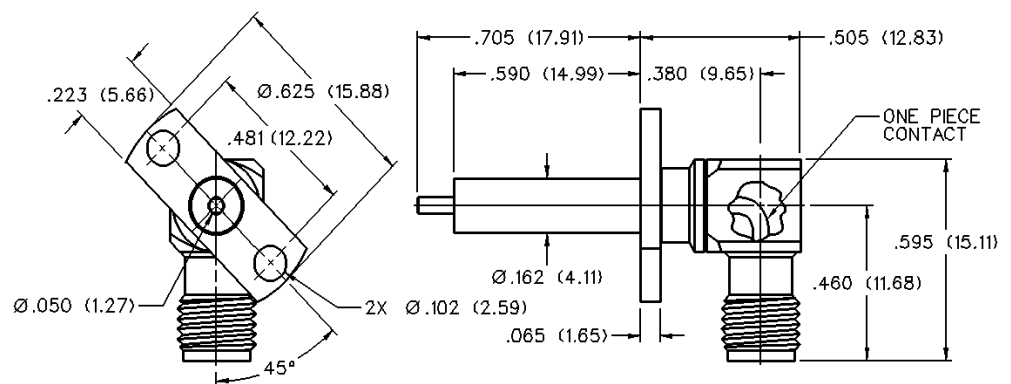
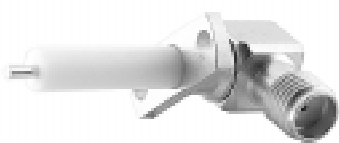
GOLD PLATED	NICKEL PLATED
142-1711-011	142-1711-016

## 2-Hole RA Flange Mount Jack Receptacle - Extended Dielectric +45° Orientation



GOLD PLATED	NICKEL PLATED
142-1711-021	142-1711-026

## 2-Hole RA Flange Mount Jack Receptacle - Extended Dielectric -45° Orientation



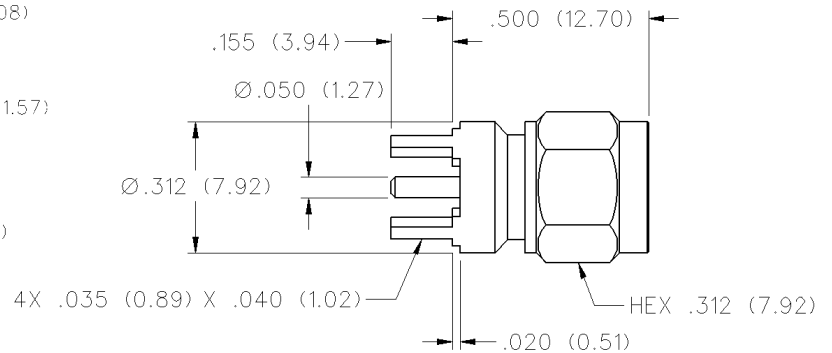
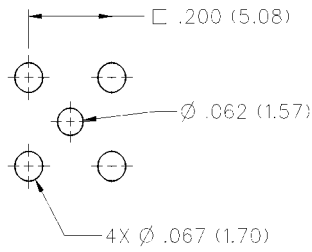
GOLD PLATED	NICKEL PLATED
142-1711-031	142-1711-036

# SMA - 50 Ohm Connectors

PC Mount

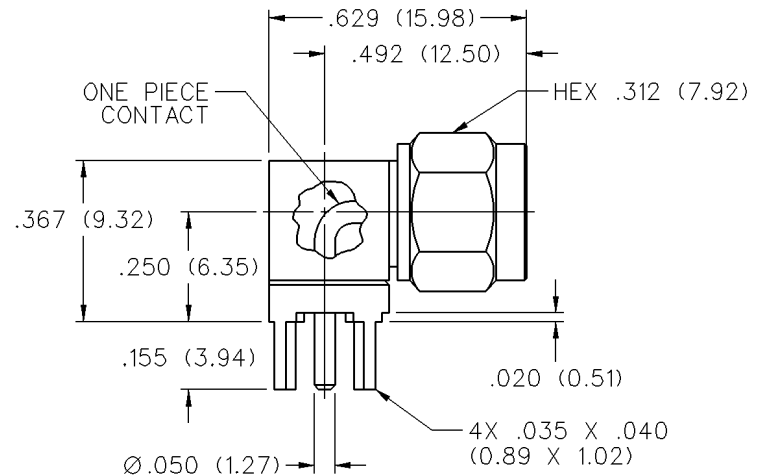
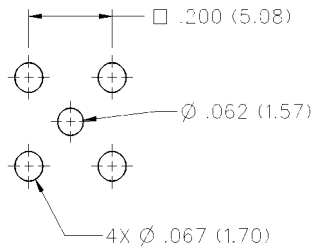
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## Straight Plug Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0801-201	142-0801-206

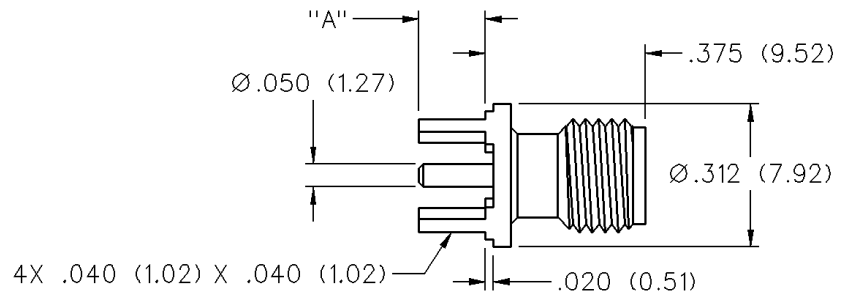
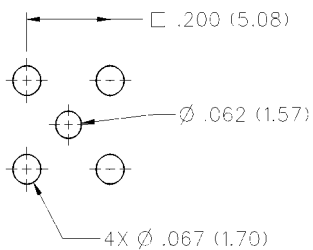
## Right Angle Plug Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0801-301	142-0801-306

Mounting hole layout figure 2 page 174.

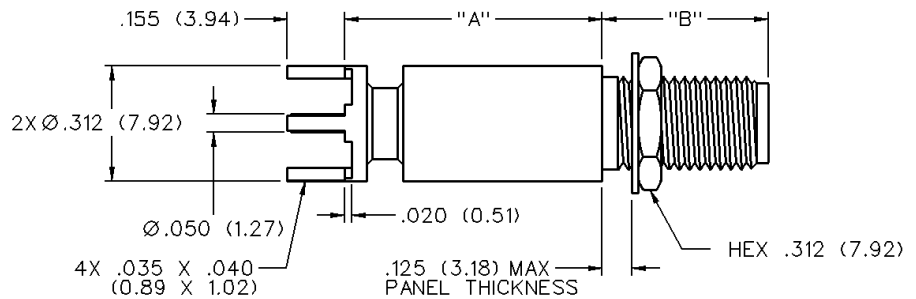
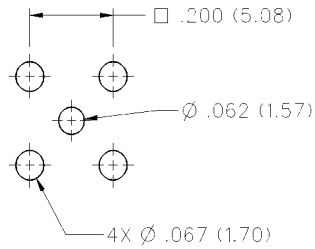
## Straight Jack Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	IR COMPATIBLE	"A"
VSWR: N/A 0-18 GHz	142-0701-201	142-0701-206		.155 (3.94)
	142-0701-231	142-0701-236	142-0701-235*	.110 (2.79)

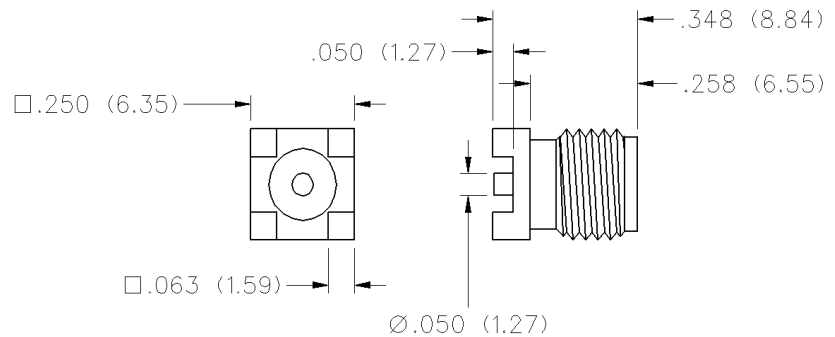
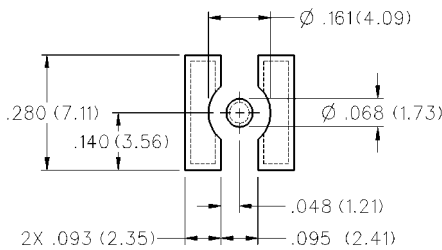
\* Tin/Lead solder dipped legs for IR Reflow Compatibility.

## Straight Bulkhead Jack Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED	"A"	"B"
VSWR: N/A 0-18 GHz	142-0701-421	142-0701-426	.700 (17.78)	.450 (11.43)
VSWR: N/A 0-18 GHz	142-0701-491	142-0701-496	.065 (1.65)	.755 (19.18)

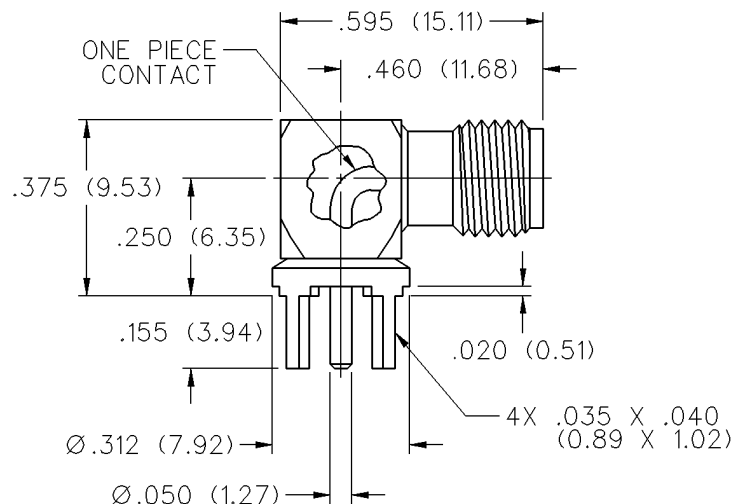
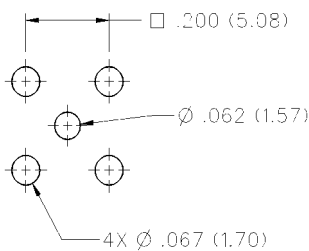
## Straight Jack Receptacle - Surface Mount



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0711-201	142-0711-205 $\Delta$

$\Delta$  Connector Mounting Pads 60%/40% Tin/Lead Coated (Solder Plated)

## Right Angle Jack Receptacle



VSWR & FREQ. RANGE	GOLD PLATED	NICKEL PLATED
VSWR: N/A 0-18 GHz	142-0701-301	142-0701-306

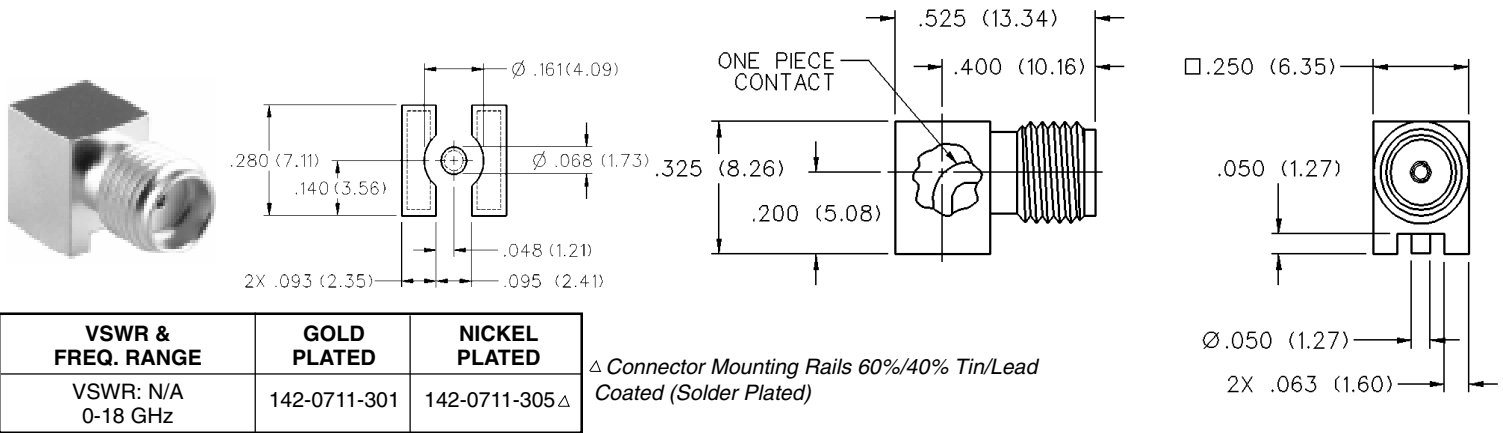
# SMA - 50 Ohm Connectors

PC Mount

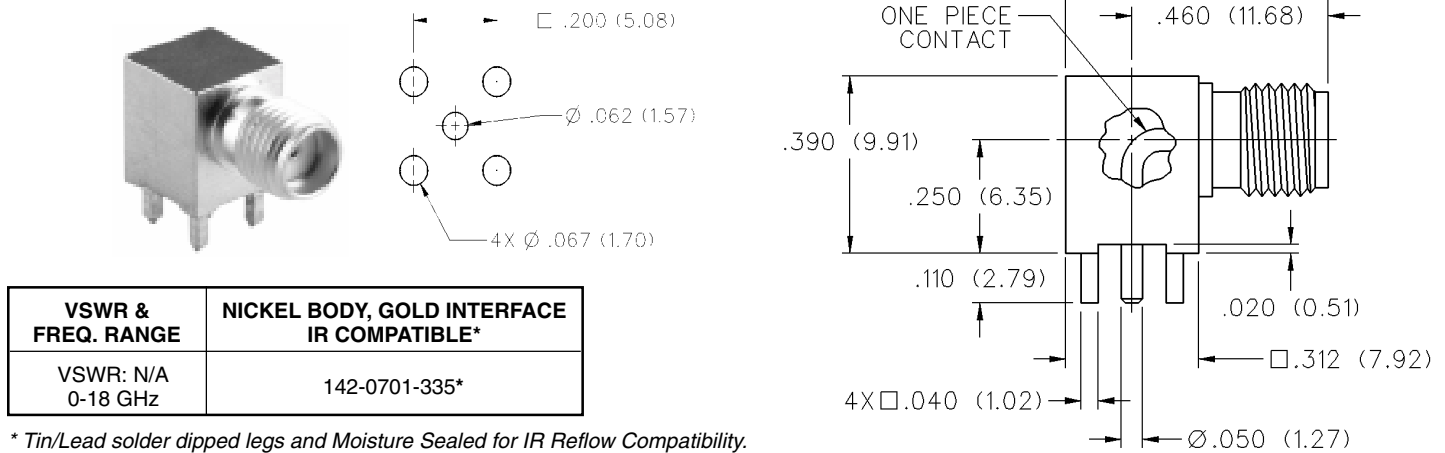


INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

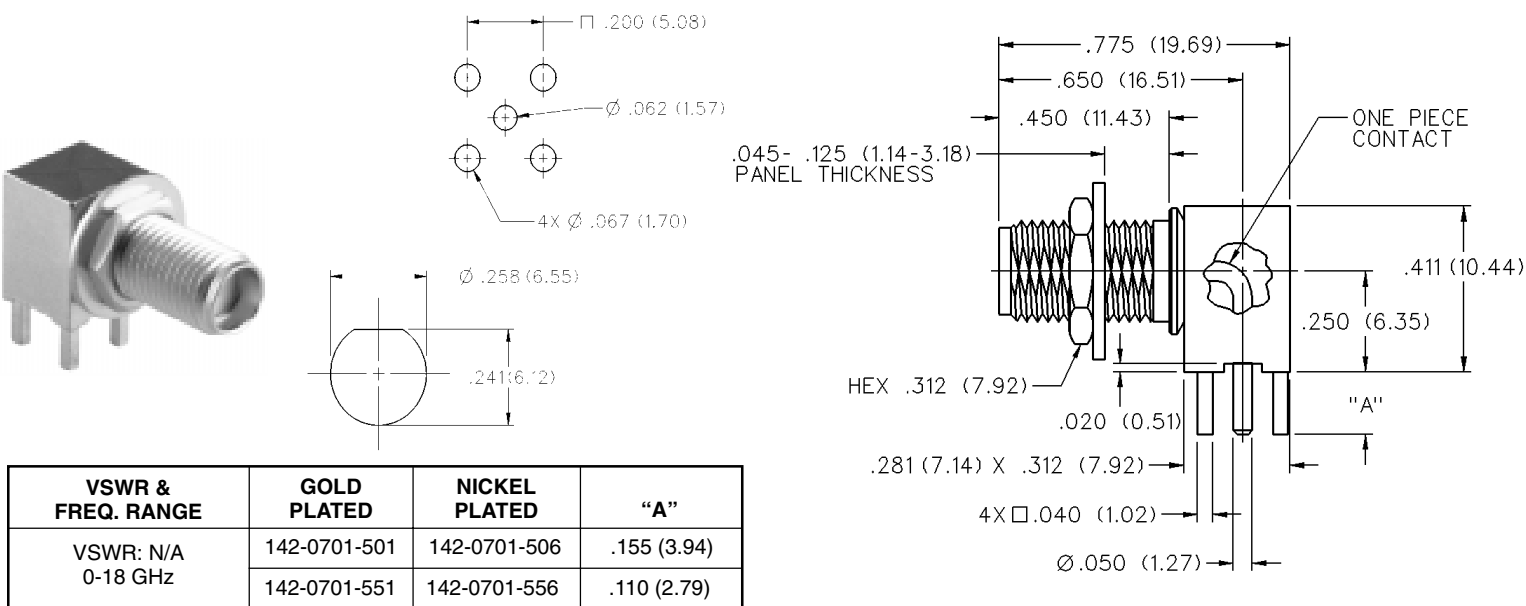
## Right Angle Jack Receptacle - Surface Mount



## Right Angle Jack Receptacle - Moisture Seal\*



## Right Angle Bulkhead Jack Receptacle





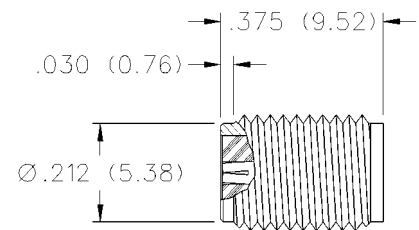
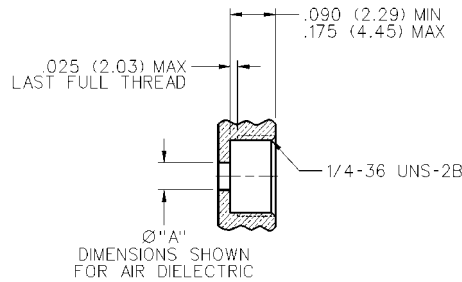
# SMA - 50 Ohm Connectors

Spark Plugs



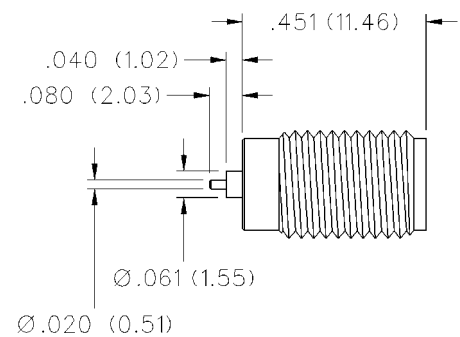
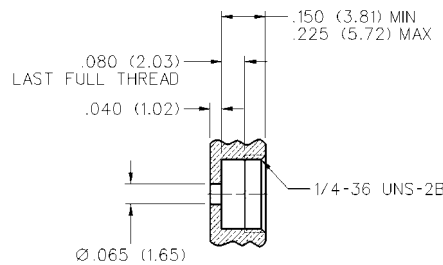
INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## Jack Receptacle - Thread Mount Field Replaceable



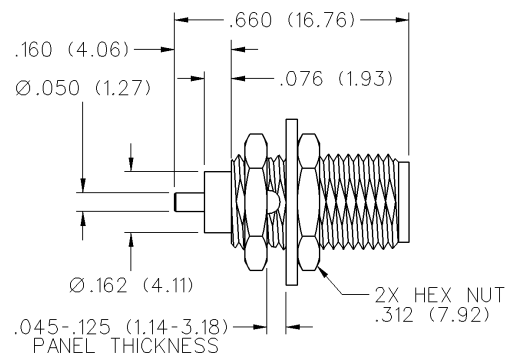
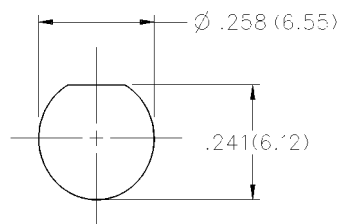
ACCEPTS PIN SIZE	GOLD PLATED	NICKEL PLATED
.020 (0.51)	142-1731-001	142-1731-006
.036 (0.91)	142-1731-011	142-1731-016

## Jack Receptacle - Thread Mount Extended Dielectric (Non-hermetic)



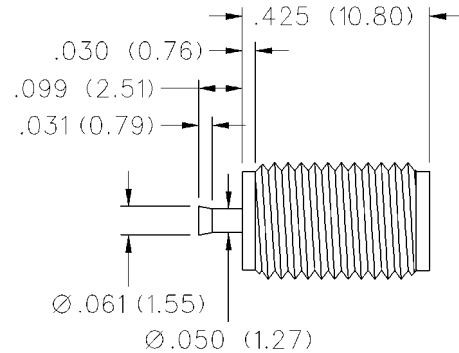
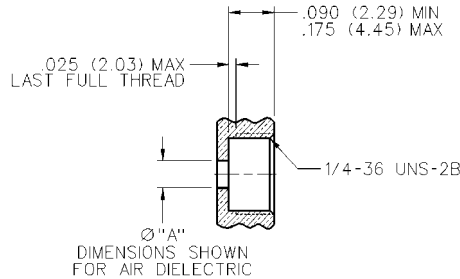
GOLD PLATED	NICKEL PLATED
142-1731-021	142-1731-026

## Jack Receptacle - Thread Mount with Hardware Extended Dielectric Bulkhead



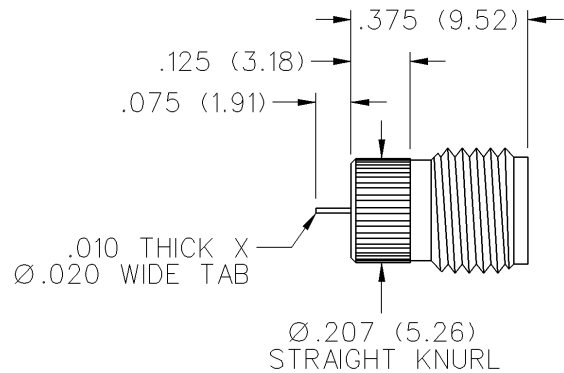
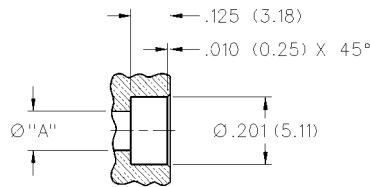
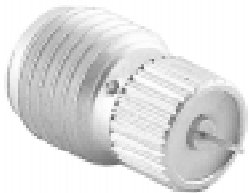
GOLD PLATED	NICKEL PLATED
142-1731-031	142-1731-036

## Jack Receptacle - Thread Mount Nail Head Contact



GOLD PLATED	NICKEL PLATED
142-1731-041	142-1731-046

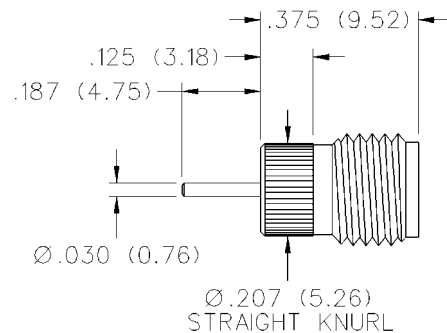
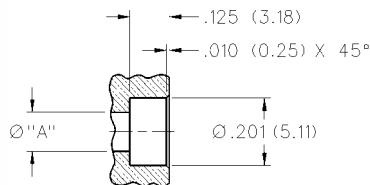
## Jack Receptacle - Knurl Mount\* Tab Contact



GOLD PLATED	NICKEL PLATED
142-1721-001	142-1721-006

\* Not intended for use in materials harder than Rockwell B82  
Assembly tooling available - contact factory.

## Jack Receptacle - Knurl Mount\* Round Contact



GOLD PLATED	NICKEL PLATED
142-1721-011	142-1721-016

\* Not intended for use in materials harder than Rockwell B82  
Assembly tooling available - contact factory.

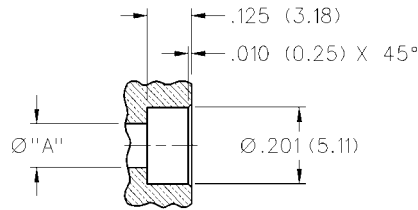
# SMA - 50 Ohm Connectors

Spark Plugs

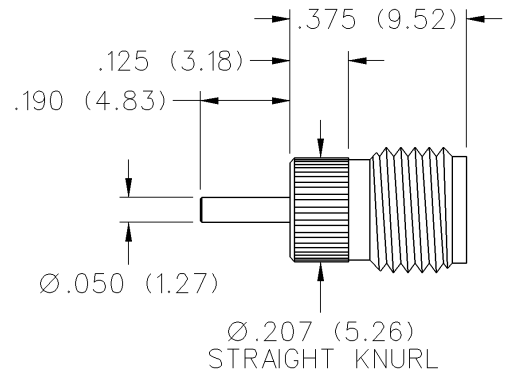


INCHES (MILLIMETERS)  
CUSTOMER DRAWINGS AVAILABLE UPON REQUEST

## Jack Receptacle - Knurl Mount\* Round Contact



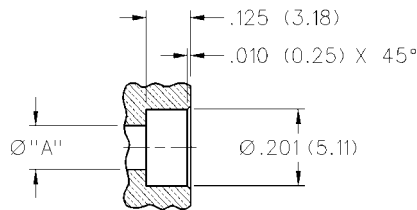
NOT INTENDED FOR USE IN MATERIALS  
HARDER THAN ROCKWELL B82



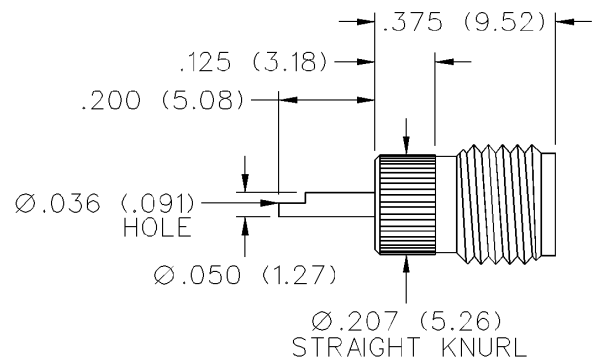
GOLD PLATED	NICKEL PLATED
142-1721-021	142-1721-026

\* Not intended for use in materials harder than Rockwell B82  
Assembly tooling available - contact factory.

## Jack Receptacle - Knurl Mount\* Solder Cup Contact



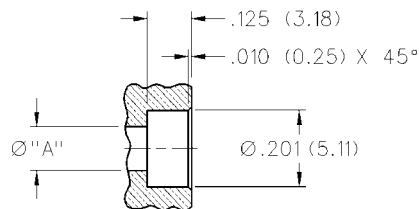
NOT INTENDED FOR USE IN MATERIALS  
HARDER THAN ROCKWELL B82



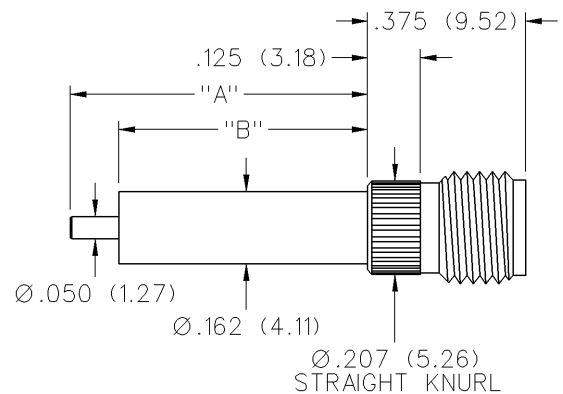
GOLD PLATED	NICKEL PLATED
142-0701-481	142-0701-486

\* Not intended for use in materials harder than Rockwell B82  
Assembly tooling available - contact factory.

## Jack Receptacle - Knurl Mount\* Extended Dielectric



NOT INTENDED FOR USE IN MATERIALS  
HARDER THAN ROCKWELL B82



"A"	"B"	GOLD PLATED	NICKEL PLATED
.190 (4.83)	.095 (2.41)	142-1721-031	142-1721-036
.240 (6.10)	.180 (4.57)	142-1721-041	142-1721-046
.705 (17.91)	.590 (14.99)	142-1721-051	142-1721-056

\* Not intended for use in materials harder than Rockwell B82  
Assembly tooling available - contact factory.